

# MODELS W1723 and W1724 15" PLANERS



## INSTRUCTION MANUAL

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# WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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# INTRODUCTION

## About Your New Planer

The **SHOP FOX**® Model W1723 and W1724 15" Planers have been specially designed to provide many years of trouble free service, and the consistent ability to hold fine adjustment settings board-after-board all day long. These planers have a stationary table and a moveable headstock, which makes readjusting accessory infeed and outfeed support-table height unnecessary. The Model W1723 has a three-knife cutterhead driven by a 3 HP thermally-protected motor and triple V-belts, which also drive infeed and outfeed rollers with a two-speed oil-lubricated gearbox. The Model W1724 has a spiral cutterhead.

The Model W1723 is mounted on an open base and uses three straight knives. The Model W1724 is mounted on a cabinet style base and uses three spiral knives. The spiral knives and cutterhead cut wood with a shearing action, giving the planer quieter operation and smoother cuts with less tear-out on difficult lumber. Since the spiral knives are self-indexing for the correct knife height, manually setting the knives with a jig is a task of the past. Refer to **Specifications on Page 3** for further details.

Either planer will be a dependable champion in any shop for years to come!

Woodstock International, Inc. is committed to customer satisfaction in providing this manual. It is our intent to make sure all the information necessary for safety, ease of assembly, practical use and durability of this product be included.

If you need the latest revised edition of this manual, you can download it from <http://www.shopfox.biz>.  
If you still have questions after reading the latest revised manual, or if you have comments please contact us at:

**Woodstock International, Inc.**  
**Attn: Technical Department**  
**P.O. Box 2309**  
**Bellingham, WA 98227**

## Woodstock Service and Support

We stand behind our machines! In the event that a defect is found, parts are missing or questions arise about your machine, please contact Woodstock International Service and Support at 1-360-734-3482 or [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz). Our knowledgeable staff will help you troubleshoot problems, send out parts or arrange warranty repair or returns.

# Warranty and Returns

Woodstock International, Inc. warrants all **SHOP FOX**® machinery to be free of defects from workmanship and materials for a period of 2 years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or to repair or alterations made or specifically authorized by anyone other than Woodstock International, Inc.

Woodstock International, Inc. will repair or replace, at its expense and at its option, the **SHOP FOX**® machine or machine part which in normal use has proven to be defective, provided that the original owner returns the product prepaid to the **SHOP FOX**® factory service center or authorized repair facility designated by our Bellingham, WA office, with proof of their purchase of the product within 2 years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that **SHOP FOX**® machinery complies with the provisions of any law or acts. In no event shall Woodstock International, Inc.'s liability under this warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all **SHOP FOX**® machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.

## Specifications

Motor .....	3 HP, 18A, 220V, Single-Phase
Maximum Cutting Width .....	14 <sup>7</sup> / <sub>8</sub> "
Maximum Cutting Height .....	6 <sup>1</sup> / <sub>8</sub> "
Maximum Depth of Cut .....	1 <sup>1</sup> / <sub>8</sub> "
Minimum Stock Thickness .....	3 <sup>3</sup> / <sub>16</sub> "
Minimum Stock Length .....	8"
Cutterhead Diameter .....	3"
Cutterhead Speed .....	5,000 RPM
Cuts Per-Minute .....	15,000
Approximate Handwheel Rotation-to-Cutterhead Travel .....	360°= 5 <sup>5</sup> / <sub>32</sub> " (4mm)
Table Size W/Extensions .....	14 <sup>7</sup> / <sub>8</sub> " x 48"
Dust Port Size .....	4"
Feed Rates .....	16 and 20 FPM
Cuts Per-Inch .....	63 and 78
Power Cord .....	12 AWG
Knives (W1723) .....	3 Straight HSS Knives
Footprint and Overall Height (W1723) .....	25 <sup>1</sup> / <sub>2</sub> " Wide x 25 <sup>1</sup> / <sub>2</sub> " Deep and 47 <sup>1</sup> / <sub>2</sub> " High
Approximate Machine Weight (W1723) .....	410 lbs.
Knives (W1724) .....	3 Spiral HSS Knives
Footprint and Overall Height (W1724) .....	21 <sup>1</sup> / <sub>2</sub> " Wide x 21 <sup>1</sup> / <sub>2</sub> " and 47 <sup>1</sup> / <sub>2</sub> " High
Approximate Machine Weight (W1724) .....	450 lbs.

# SAFETY FIRST!

## READ MANUAL BEFORE OPERATING MACHINE FAILURE TO FOLLOW INSTRUCTIONS BELOW WILL RESULT IN PERSONAL INJURY

### **DANGER**

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

### **NOTICE**

This symbol is used to alert the user to useful information about proper operation of the equipment.


1. **Thoroughly read the instruction manual before operating your machine.** Learn the applications, limitations and potential hazards of this machine. Keep manual in a safe, convenient place for future reference.
2. **Keep work area clean and well lighted.** Clutter and inadequate lighting invite potential hazards.
3. **Ground all tools.** If a machine is equipped with a three-prong plug, it must be plugged into a three-hole electrical outlet or grounded extension cord. If using an adapter to aid in accommodating a two-hole receptacle, ground using a screw to a known ground.
4. **Wear eye protection at all times.** Use safety glasses with side shields or safety goggles (that meet the national safety standards) while operating this machine.
5. **Avoid dangerous environments.** **DO NOT** operate this machine in wet or open flame environments. Airborne dust particles could cause an explosion and severe fire hazard.
6. **Ensure all guards are securely in place and in working condition.**
7. **Make sure switch is in the "OFF" position** before connecting power to machine.
8. **Keep work area clean and free of clutter, grease, etc.**
9. **Keep children and visitors away.** All visitors should be kept a safe distance away while operating unit.
10. **Childproof workshop with padlocks, master switches or by removing switch keys.**
11. **Disconnect machine when cleaning, adjusting or servicing.**
12. **DO NOT force tool.** The machine will do a safer and better job at the rate for which it was designed.

13. **Use correct tool.** DO NOT force machine or attachment to do a job for which it was not designed.
14. **Wear proper apparel.** DO NOT wear loose clothing, neck ties, gloves, jewelry, etc.
15. **Remove adjusting keys and wrenches** before starting the machine. Make this a habit!
16. **Use proper extension cord.** When using an extension cord, make sure it is in good condition. Use extension cords 100' or less in length that are rated Hard Service (grade S) or better, and that have a conductor size of 16 AWG. A drop in line voltage, loss of power and overheating can result when using an undersized cord. The extension cord must have a ground wire and ground plug pin, as well.
17. **Keep proper footing and balance** at all times, and make sure you lock a mobile base in position.
18. **DO NOT leave machine operating and unattended**—wait until it comes to a complete stop before leaving the area.
19. **Perform machine maintenance and care.** Follow lubrication and accessory attachment instructions in the manual.
20. **Keep machine away from open flame.** Operating machines near pilot lights and/or open flames creates a high risk if dust is dispersed in the area. Dust particles and an ignition source may cause an explosion. DO NOT operate the machine in high risk areas, including but not limited to, those mentioned above.
21. **DO NOT use machine under the influence of drugs or alcohol or if you are excessively tired.**
22. **DO NOT let untrained people use the machine if they are not supervised by an experienced operator.**
23. **If at any time you are experiencing difficulties performing the intended operation,** stop using the machine! Then contact our service department or ask a qualified expert how the operation should be performed.
24. **Magnetic switches and power switches can be accidentally turned on when they are bumped.** Always be aware of switch location when moving items around the shop.



# Additional Safety Instructions for Planers

SAFETY



**! WARNING**

READ and understand this entire instruction manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. **DO NOT** risk your safety by not reading!

**! CAUTION**

USE this and other machinery with caution and respect, and always consider safety first, as it applies to your individual working conditions. Remember, no list of safety guidelines can be complete, and every shop environment is different. Failure to follow guidelines can result in serious personal injury, damage to equipment or poor work results.

1. **Always** make sure the planer is on firm ground and is stable before operating. Never use the planer if it wobbles or is unstable.
2. **Always** inspect the workpiece before running it through the planer. Stock with loose knots, nails, staples, dirt or other foreign objects should be rejected from use or corrected by eliminating the condition that makes it questionable.
3. **Always** make sure that all components of the planer are adjusted to their proper specifications before planing stock.
4. **Always** use the help of another person or some type of support fixture when planing long stock.
5. **Never** stand behind the workpiece when you are feeding it into the planer; the workpiece could possibly kick back and be thrown in the direction from which it came.
6. **Never** operate the planer if knives are dull or damaged. Sharp knives are safer and produce better final results.
7. **Never** process any material through the planer other than wood. This planer is designed for wood only!
8. **Always** take multiple light cuts rather than excessively deep cuts.
9. **Never** attempt to free a stalled workpiece while the planer is connected to a power source.
10. **Never** reach inside the planer or open the top cover while the planer is connected to a power source.
11. **Never** plane wood that is less than 8" long or less than  $\frac{3}{16}$ " thick.
12. **Always** wear hearing protection when operating the planer.



# ELECTRICAL

## 220V Operation

The motor supplied with your new planer is rated at 3 HP and will draw approximately 18 amps during 220 volt operation. When choosing an outlet for this machine, we recommend using a NEMA 6-20 plug and receptacle with a 20 amp circuit breaker or fuse. Keep in mind that a circuit being used by other machines or tools at the same time will add to the total load being applied to the circuit. Add up the load ratings of all machines on the circuit. If this number exceeds the rating of the circuit breaker, fuse or wires, use a different circuit.

## Extension Cords


We do not recommend using an extension cord for 220V equipment. Instead, arrange the placement of your machinery and installed wiring to eliminate the need for extension cords. If you must use an extension cord, make sure it is rated Standard Service (grade S) and capable of handling an 18 amp load. The extension cord must always contain a ground wire and plug pin. Be sure to ask an expert about the correct gauge to use with your desired cord length. Always repair or replace extension cords when they become worn or damaged.

## Grounding

This machine must be grounded! The electrical cord supplied with your planer does not come with a 220 volt plug. Install a NEMA 6-20 plug and outlet (See **Figure 1**) with a ground pin. If your outlet does not accommodate a ground pin, have a ground circuit installed by a qualified electrician or have an appropriate adapter installed and grounded properly. An adapter with a grounding wire does not guarantee the machine will be grounded. A ground source must be verified.

**NOTICE**

**NEVER** replace the circuit breaker with one rated at a higher amperage or damage to the circuit may occur.



**⚠ WARNING**

This equipment must be grounded. Verify that any existing electrical outlet and circuit you intend to plug into is actually grounded. Under no circumstances should the grounding pin from any three-pronged plug be removed. Serious injury may occur.

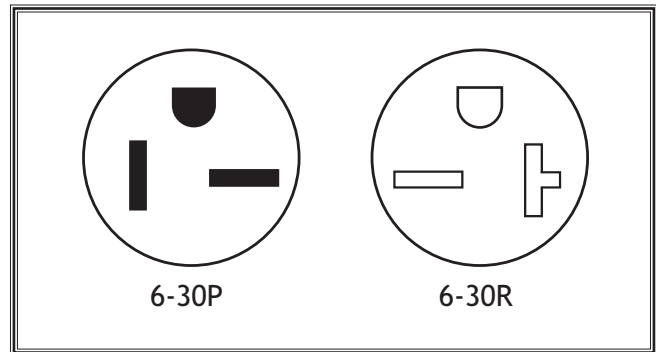


Figure 1. NEMA 6-20 plug and outlet.

# ASSEMBLY

## Overview

Inventory your package carefully with the list below. For missing parts, contact Woodstock International, Inc. at 360-734-3482 or by e-mail at: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz).

## Box Contents

W1723 Planer Unit or W1724 Planer Unit on Cabinet

a. W1723 & W1724 Extension Roller Assembly:  
(2) Extension Roller

b. W1723 & W1724 Handwheel and Hardware Bag:  
(1) Handwheel  
(1) Hex Nut M10-1.5  
(1) Flat Washer 10mm  
(1) Direction Label

c. W1723 & W1724 Tool Bag:  
(1) Handwheel Handle  
(1) 3mm Allen Wrench  
(1) 4mm Allen Wrench  
(1) 5mm Allen Wrench  
(1) 6mm Allen Wrench  
(1) 8mm & 10mm Combo Wrench  
(1) 12mm & 14mm Combo Wrench  
(1) (W1724) T-Handle Long Allen Wrench 4mm  
(1) (W1724) Spiral Cutterhead Alignment Tool

d. W1723 Main Hardware Bag:  
(6) Flat Washer 8mm  
(6) Hex Bolt M8-1.25 x 20  
(6) Set Screws M8-1.25 x 12  
(32) Carriage Bolt  $\frac{5}{16}$ "-18 x 1"  
(36) Flat Washer  $\frac{5}{16}$ "  
(36) Hex Nut  $\frac{5}{16}$ "  
(4) Lock Washer  $\frac{5}{16}$ "  
(4) Hex Bolt  $\frac{5}{16}$ "-18 x 1"

d. W1724 Main Hardware Bag:  
(6) Flat Washer 8mm  
(6) Set Screws M8-1.25 x 12  
(6) Hex Bolt M8-1.25 x 20

e. W1723 Knife Setting Jig Assembly:  
(1) Knife Setting Rod  
(2) Knife setting gauge  
(4) E-clip ring 9mm

f. W1723 Stand Assembly:  
(4) Leg  
(4) Brace  
(2) Left or Right Angle (19  $\frac{1}{2}$ " Long)  
(2) Front or Rear Angle (19  $\frac{7}{8}$ " Long)

Most of your new planer has been factory assembled; however, depending on manufacture date, some parts shown in Figure 2 may already have been assembled. Please take your time and try to be as accurate as possible when following each step. This care will provide you with better results when you are finished.

**Additional Tools Required:** Besides the tools that are included with the planer, you will also need a Phillips® screwdriver, a flat-head screwdriver and a good straightedge. A set of feeler gauges, and a dial indicator are needed for the **Adjustments** section.

g. (1) Dust Port (W1723 & W1724)

h. (1) Dust Port Hardware Bag  
(6) Phlp HD Screws M6-1.0 x 12

i. W1724 Foot Hardware Bag:  
(4) Foot  
(4) Hex Nut M8-1.25

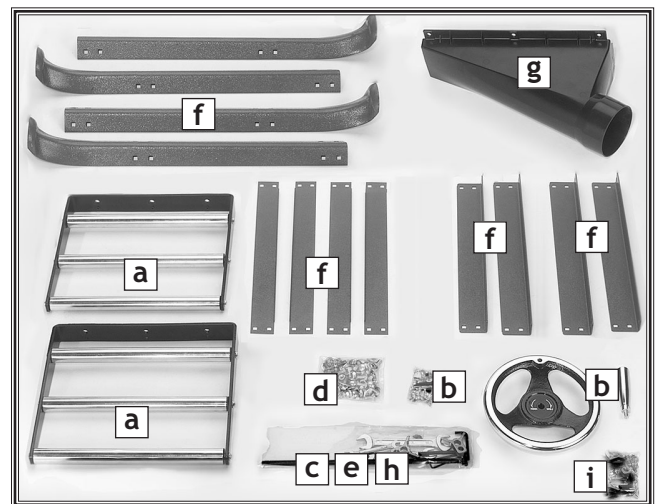
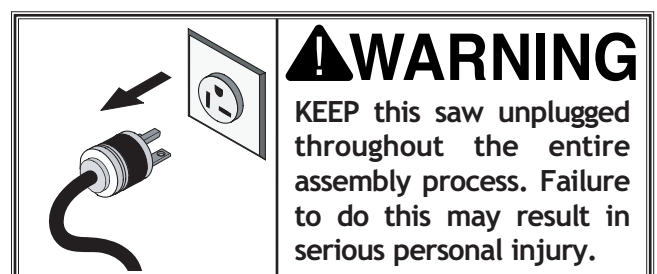
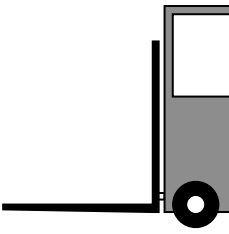



Figure 2. Parts that need to be assembled.



## Shop Preparation

- **Floor Load:** Your planer represents a large weight load in a small footprint. Most commercial floors are suitable for the planer. Some residential floors may require additional bracing to support both machine and operator.
- **Working Clearances:** Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your planer.
- **Lighting and Outlets:** Lighting should be bright enough to eliminate shadow and prevent eye strain. Electrical circuits should be dedicated or large enough to handle amperage requirements. Outlets should be located near each machine so power or extension cords are clear of high-traffic areas. Observe local electrical codes for proper installation of new lighting, outlets, or circuits.

	<p><b>⚠ WARNING</b></p> <p>USE power lifting equipment, your planer is a heavy load. Serious personal injury may occur if safe moving methods are not followed.</p>
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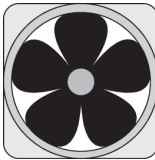


	<p><b>⚠ CAUTION</b></p> <p>MAKE your shop “child safe.” Ensure that your workplace is inaccessible to youngsters by closing and locking all entrances when you are away. NEVER allow untrained visitors in your shop when assembling, adjusting or operating equipment.</p>
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## Cleaning Planer

The table and other unpainted parts of your planer are coated with a waxy grease that protects them from corrosion during shipment. Clean this grease off with a solvent cleaner or citrus-based degreaser. DO NOT use chlorine-based solvents—if you happen to splash some onto a painted surface, you will ruin the finish.

	<p><b>⚠ WARNING</b></p> <p>NEVER use gasoline or other petroleum-based solvents to clean with. Most have low flash points, which make them extremely flammable. A risk of explosion and burning exists if these products are used. Serious personal injury may occur if this warning is ignored!</p>
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	<p><b>⚠ WARNING</b></p> <p>NEVER smoke while using solvents. A risk of explosion or fire exists and may result in serious personal injury.</p>
--	--

  	<p><b>⚠ CAUTION</b></p> <p>ALWAYS work in well-ventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they do not create fire or environmental hazards.</p>
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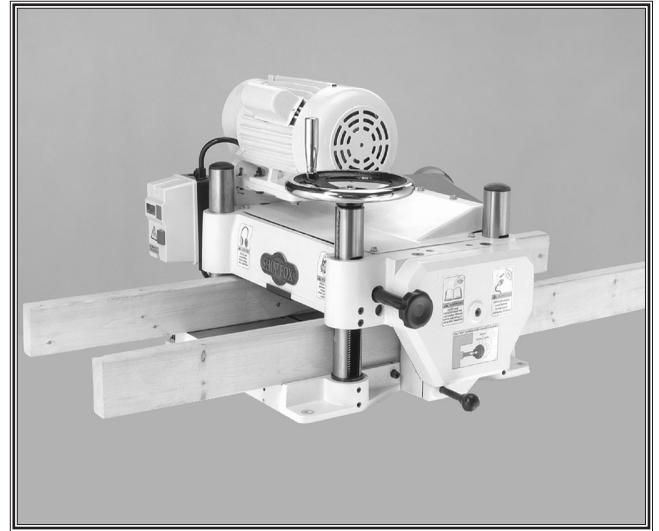
# Stand (W1723)

The Model W1723 is equipped with a stand that can be mounted to a mobile base.

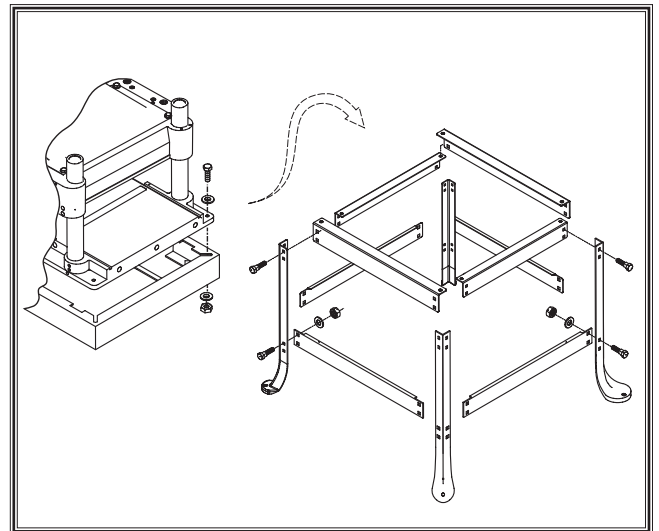
	<p><b>! WARNING</b>  <b>USE</b> helpers or power lifting equipment to lift this planer. Otherwise, serious personal injury may occur.</p>
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To assemble the stand and mount the planer, do these steps:

1. Insert (2) two-by-fours into the planer for lifting supports, as shown in **Figure 3**.
2. Rotate the cutterhead so the knife edges are clear, and lower the cutterhead casting so the (2) two-by-fours are clamped between the table and the cutterhead casting.
3. Layout all stand legs, supports and hardware; and use the  $\frac{5}{16}$ "-18 x  $\frac{1}{2}$ " carriage bolts, nuts, and washers from the hardware bag to assemble the stand as shown in **Figure 4**.
4. Use mechanical lifting equipment or helpers and set the planer on the stand.
5. Secure the planer to the stand at all four corners with the four  $\frac{5}{16}$ "-18 x 1" hex bolts, four nuts, and eight washers.



**Figure 3.** Suggested lifting fixture.



**Figure 4.** W1723 stand assembly.

## Handwheel

The handwheel operates the chain-driven lead screws, which raise and lower the cutterhead to control the cutting depth.

To mount the handwheel and crank, do these steps:

1. Install the key in the shaft, and slide the handwheel onto the shaft.
2. Install the 8mm flat washer and tighten the M10-1.5 hex nut on the end of the shaft. See **Figure 5**.
3. Thread and tighten the handle into the handwheel to keep the crank locked in place.



**Figure 5.** Installed handwheel and handle.



# Extension Rollers

The extension roller assemblies are identical for both the infeed and the outfeed ends of the table. To help minimize snipe, you may have to adjust the extension rollers periodically so they are approximately 0.030" above the table.

To mount the extension rollers, do these steps:

1. Loosen the setscrews where the table rollers mount to the planer body (on both ends) as shown in **Figure 6**.
2. Use a wrench to lower the rollers on their eccentric shafts
3. Position the extension roller assemblies on the planer table, and install the M8-1.25 x 20 mounting bolts and washers finger tight.
4. Place a straightedge across the table and the extension rollers as shown in **Figure 7**.
5. Turn the adjustment setscrews shown in **Figure 8**, so the extension roller assemblies are flush with the table surface as indicated by the straightedge.
6. Tighten the mounting bolts to secure the extension bar in place. See **Figure 8**.

The top of the rollers should now be completely even with the top of the table. Double-check to make sure that the rollers did not move during the tightening process.

DO NOT adjust the table rollers you previously retracted into the planer table, because the final set of adjustments will be explained in the **ADJUSTMENTS** section.

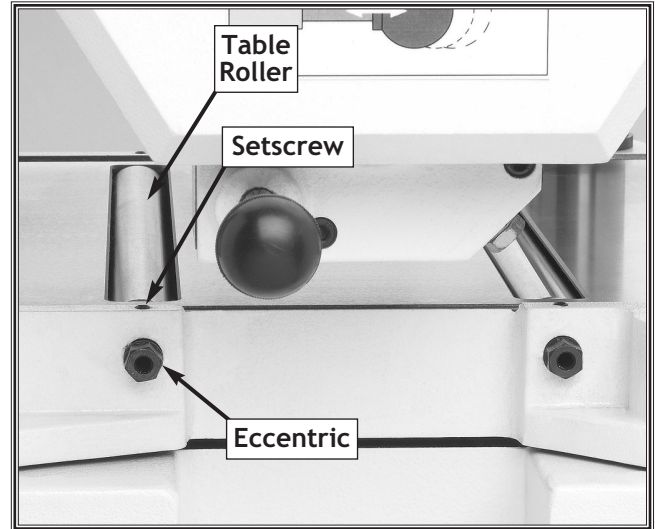


Figure 6. Table rollers and setscrews.



Figure 7. Extension roller-to-table alignment.

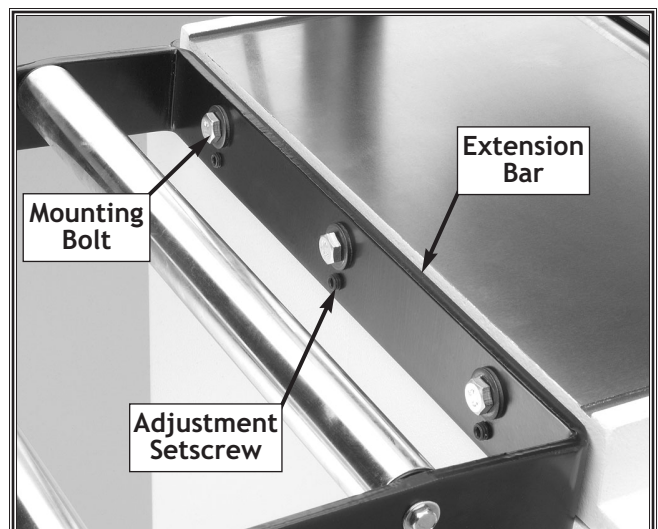


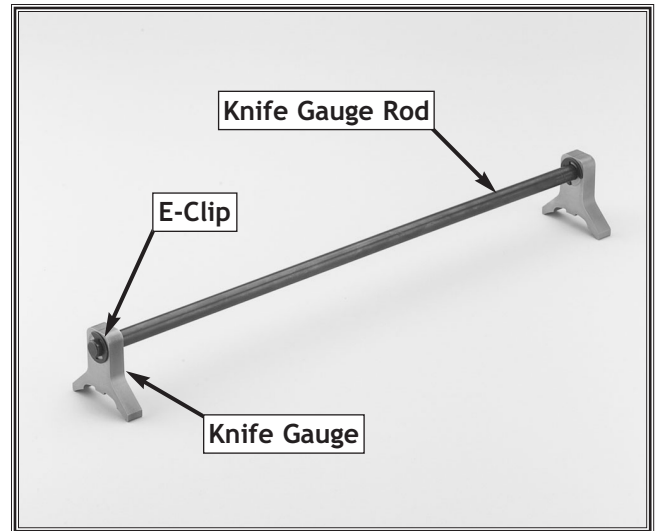
Figure 8. Installed roller extension.

## Knife Setting Jig (W1723)

We have provided a jig to make the knife setting process easy and quick on the Model W1723 Planer. See **Figure 9**.

To assemble the knife setting jig, do these steps:

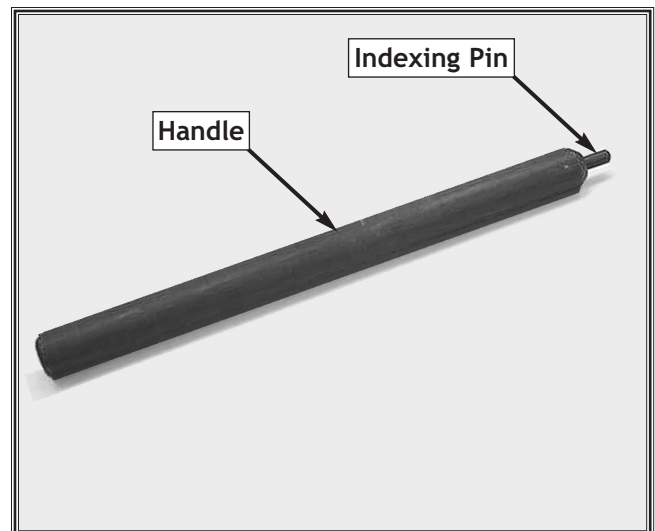
1. Snap two E-clips over the inner groove in the knife gauge rod.
2. Slide the aluminum knife setting jig brackets onto the rod.
3. Snap the other two E-clips over the outside grooves in the knife setting rod.



**Figure 9.** W1723 straight-knife setting jig.

## Spiral Knife Alignment Tool (W1724)

We have provided a spiral knife alignment tool for the Model W1724 Planer. See **Figure 10**. This tool is all that is needed to help align the knives on the Model W1724. Refer to **Page 20** for knife replacement instructions and alignment tool use.



**Figure 10.** W1724 spiral-knife indexing tool.


# ADJUSTMENTS

## Planer Overview

Take the time to familiarize yourself with the controls of your new planer. While the Model W1724 Planer is shown in **Figure 11**, all controls are the same for the Model W1723 Planer. The controls will be frequently mentioned throughout this instruction manual. The better you know your machine, the better you can make it perform.

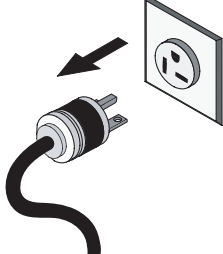
As with all precision machinery, adjustments to the planer require very close tolerances. The adjustments described in this section have a basic factory setting. However, due to storage and shipping, it may be necessary for you to fine-tune these adjustments in the same order as presented in this manual, or your planing results will be compromised. To achieve exact results, use a dial indicator or a Rotacator® (refer to **Planer Accessories on Pages 34 and 35**).

Once you set up the planer correctly, you will enjoy stable machine settings and excellent planing results for a long time.



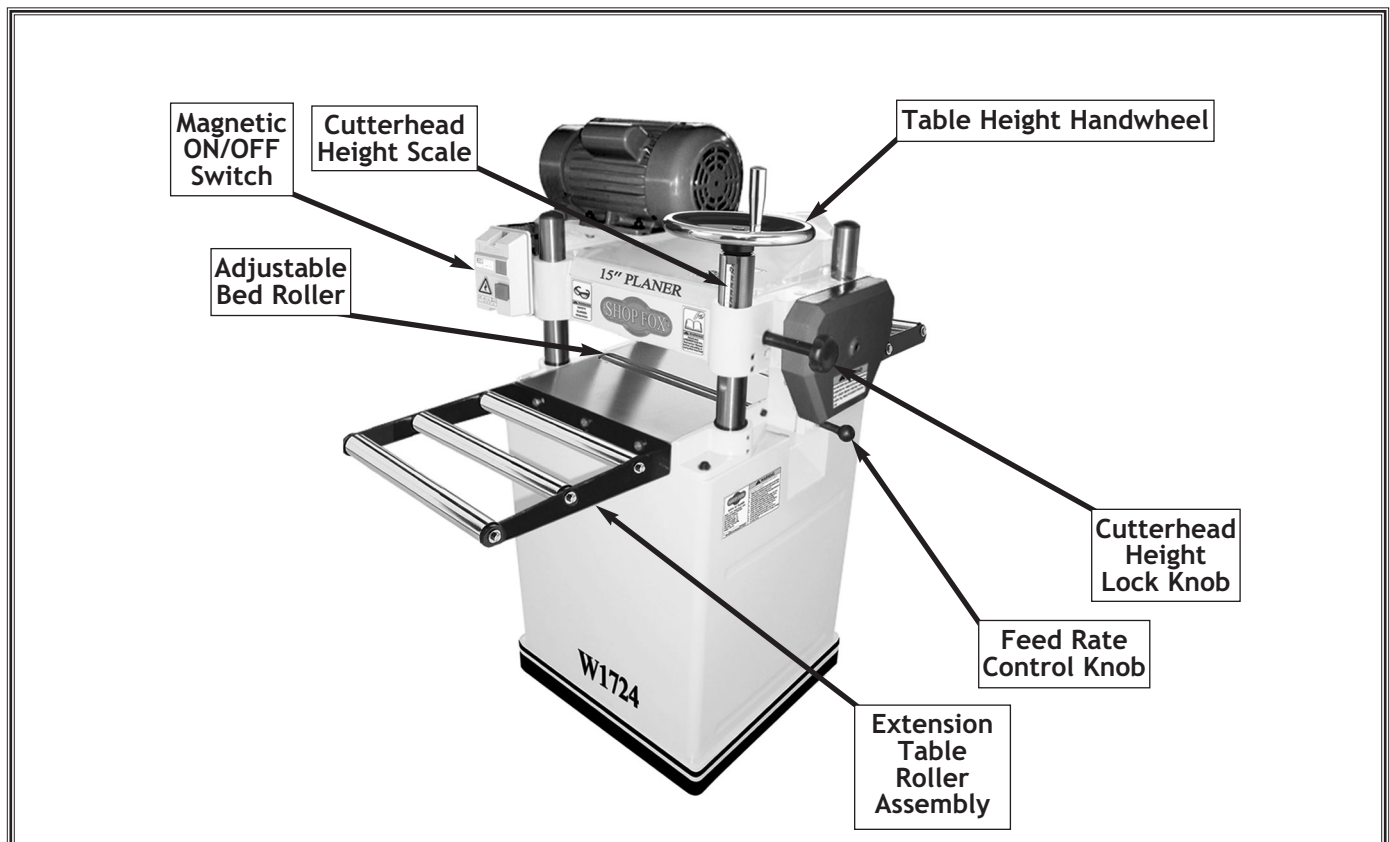
**⚠ CAUTION**

WEAR thick gloves and use extreme caution when working near cutting surfaces. Planer knives are dangerously sharp! Failure to exercise care while working near knives could result in severe injury.



**⚠ WARNING**

NEVER connect power to the machine while performing adjustments. Failure to follow this warning may result in serious personal injury.



**Figure 11.** Machine controls.



# Cutterhead Alignment

The most critical adjustments made on your new planer are dependent on the cutterhead body being parallel to the table. Because of this alignment, checking the table is the first step to establishing an accurate planer.

There are two dimensions you should be concerned about when checking/aligning the table—the cutterhead casting should be parallel to the table from front-to-back, and the cutterhead should be parallel with the table from side-to-side.

The cutterhead casting and the cutterhead body has been pre-set at the factory, but it is a good idea to check any machine thoroughly before use.

To check the cutterhead-to-table alignment, do these steps:

1. **UNPLUG THE PLANER!**
2. If you have not already done so, loosen the setscrews where the table bed rollers mount to the planer body at either end of both rollers. See **Figure 12**.
3. Use a wrench to lower the rollers on their eccentric shafts. Leave the table rollers in the retracted position until instructed to reset the knife height at the end of this section.
4. Make the gauge shown in **Figure 13** out of a block of wood.
5. Place the block on one end of the table, directly under the cutterhead casting.
6. Lower the cutterhead casting so the block only touches the cutterhead casting (keep knives rotated out of the way for this step). See **Figure 14**.
7. Without moving the cutterhead casting, slide the block of wood to the other end of the cutterhead casting. If the block of wood will not fit, or if the block is below the casting, measure this gap with a feeler gauge. If the difference is more than 0.002", then the cutterhead casting needs to be adjusted from left to right.

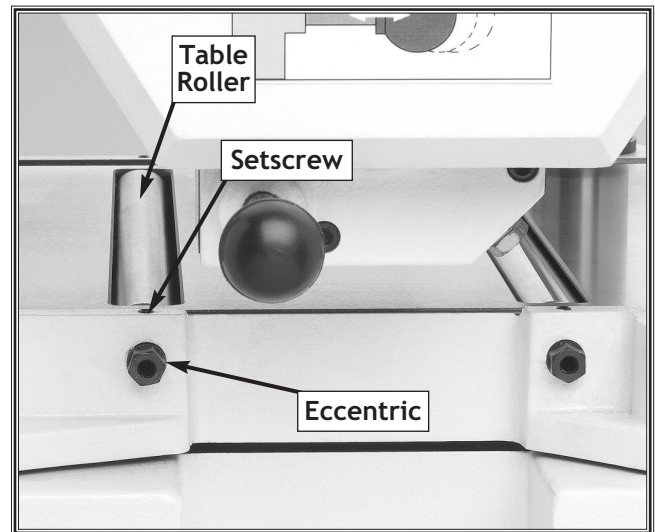


Figure 12. Table bed roller adjustment.

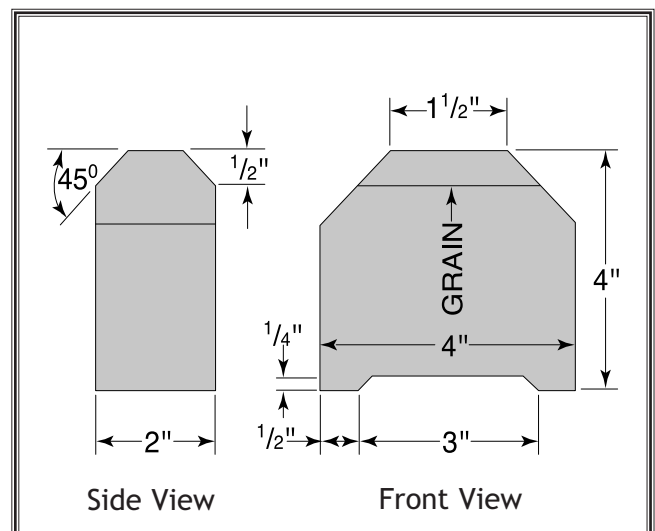


Figure 13. Gauge block.

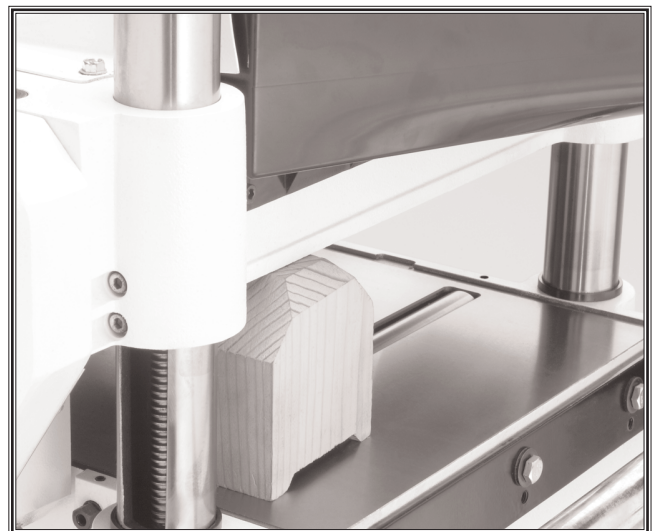


Figure 14. Checking cutterhead alignment.

8. Place the block under the front of the head casting to either side of the depth stop.
9. Lower the cutterhead casting so the block barely touches the casting.
10. Remove the block and place it between the middle-rear of the cutterhead casting and the table. If there is a gap or it will not fit under the head casting, measure the difference with a feeler gauge. If this measurement is more than 0.002", then the table needs to be adjusted from front to back.
11. There are two methods to adjust the table on your planer. The first is for adjustments smaller than 0.016" and the second is for adjustments larger than 0.016".

**To adjust the cutterhead casting less than 0.016", do these steps:**

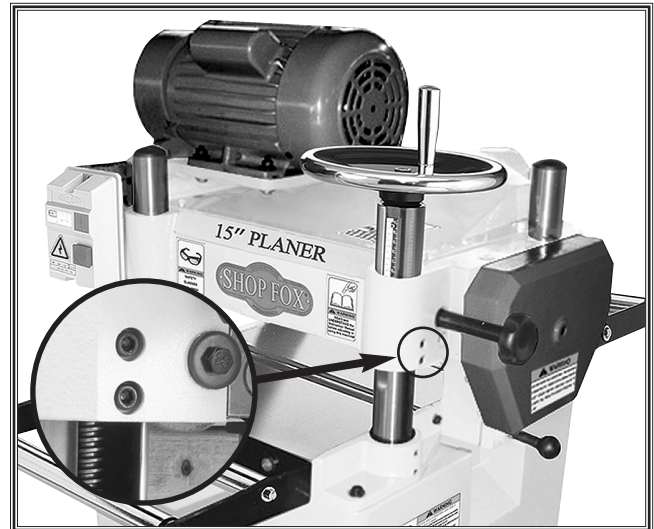
**NOTE:** This adjustment may require some trial and error and two people. One person holds the head casting in position with the two-by-four, and the other tightens the casting mounting screws shown in **Figure 15**.

1. Loosen the cutterhead casting mounting screws and lift/lower the casting with a long two-by-four until the table and the casting are parallel with each other.
2. Adjust each column on both sides until the cutterhead casting is properly set. While adjusting the columns, tighten each screw after each step to ensure accurate results.

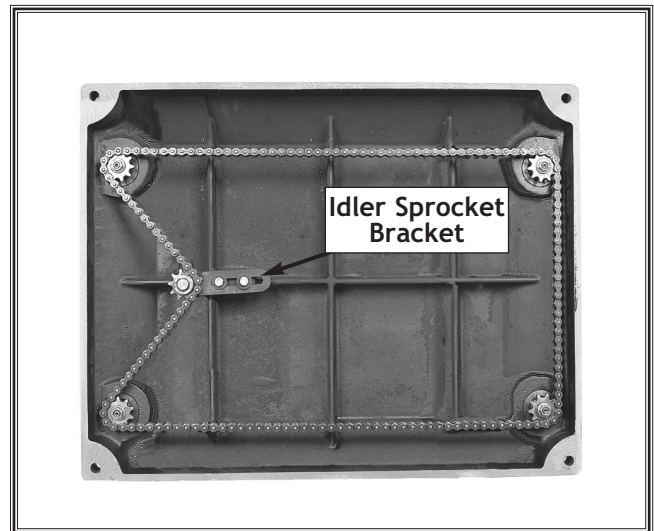
**To adjust the cutterhead casting more than 0.016", do these steps:**

**NOTE:** The underside of the table has five sprockets and a chain. The four corner sprockets control cutterhead casting height, and the fifth sprocket (idler sprocket) controls chain tension. See **Figure 16**.

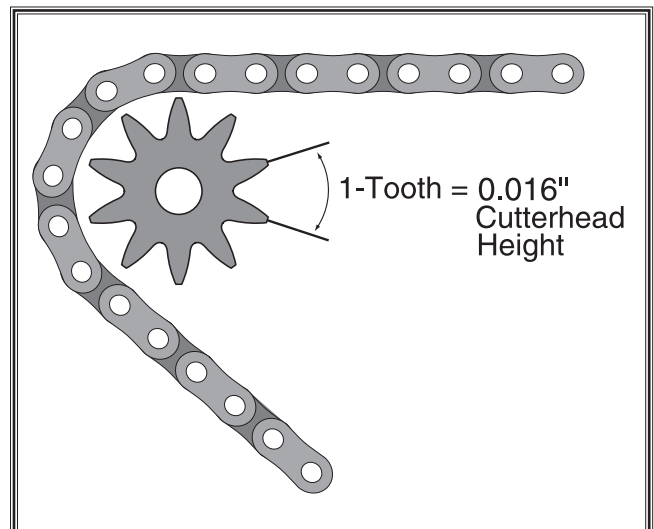
1. Loosen the two bolts on the idler sprocket bracket (as shown in **Figure 16**) to loosen the chain so that each sprocket can be rotated on its own. See **Figure 17**.



**Figure 15.** Cutterhead casting mounting screws.



**Figure 16.** Underside of planer table.



**Figure 17.** Sprocket tooth-to-height ratio.

2. Hold the chain away from the sprocket while you turn the sprocket. Make sure, as you adjust each sprocket, that you count the number of teeth that pass a fixed point.

**NOTE:** As viewed from the underside of planer, moving the sprockets clockwise lowers the cutterhead casting and moving counter-clockwise raises the casting. Each tooth on the corner sprockets equals 0.016" of vertical movement when the sprockets are turned. See **Figure 17**.

3. After you have the cutterhead casting adjusted to within 0.016" from front-to-back and from side-to-side, tighten the chain so all of the chain slack is removed.

4. Loosen the cutterhead casting mounting screws and use a two-by-four to pry and lift/lower the cutterhead casting until the casting and table are parallel with each other.

**NOTE:** This adjustment may require some trial and error and two people. One person holds the head casting in position with the two-by-four, and the other tightens the casting mounting screws shown in **Figure 15**.

5. Adjust each column on both sides until the cutterhead casting is properly set. While adjusting the columns, tighten each screw after each step to ensure accurate results.
  - If you have already adjusted the knives on the Model W1723, or you have the Model W1724, go to **Page 22** and adjust the feed rollers and chip breaker.

# Inspecting Knives (W1723)

The Model W1723 features a three straight-knife cutterhead. Correctly positioned knives act as a reference point for adjusting the feed rollers and the chip breaker. The knife edge should be within 0.002" from one end to the other. Improperly adjusted knives may unbalance the cutterhead, reduce the sharpness of knife edges prematurely, shorten bearing life, and produce poor planing results.

	<p><b>CAUTION</b> WEAR thick gloves and use extreme caution when working near planer knives. These knives are dangerously sharp! Failure to exercise care while working near knives could result in severe injury.</p>
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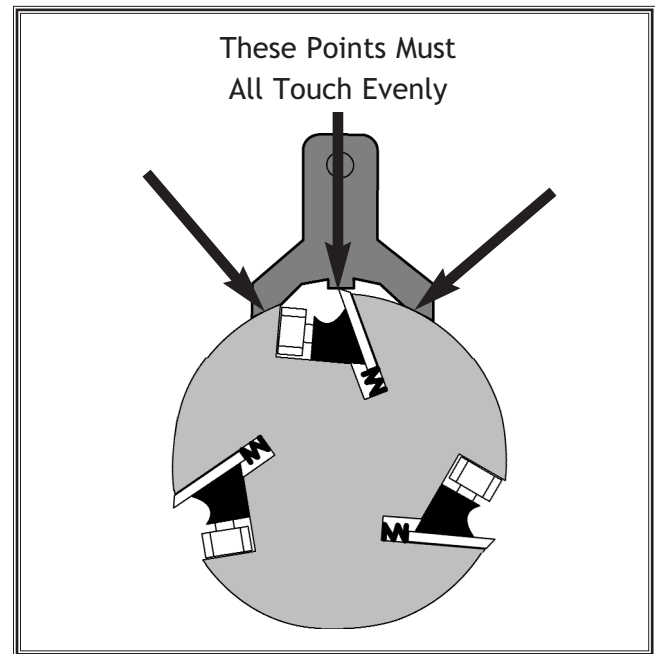


Figure 18. Correct jig position on the cutterhead.

To check the knives, do these steps:

1. **UNPLUG THE PLANER!**
2. Remove the upper dust cover and dust port for access to the cutterhead.
3. Remove the plastic chip deflector.
4. Remove the V-belt cover from the left-hand side of the planer (facing front).
5. Using the V-belt to rotate the cutterhead, turn the cutterhead so a knife is accessible.
6. Position both feet of the knife setting jig on the cutterhead. The knife should barely touch the center of the jig as shown in **Figure 18**.
  - If the knife does not contact the center of the jig, or if the knife contacts the center of the jig but both feet will not sit solidly on the cutterhead, adjust the knives as outlined on **Page 18** in the **Knife Replacement** procedure.

<p style="text-align: center;"><b>NOTICE</b></p> <p><i>For quick and easy knife adjustments to within 0.001" from one knife end to the other, use a Planer Pal®. Refer to Planer Accessories on Pages 34 and 35 for more details.</i></p>
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# Knife Replacement (W1723)

The Model W1723 Planer is equipped with both springs and jack screws for knife adjustment. Springs allow adjustments to be made quickly, while jack screws are more accurate. Both methods are covered below. The W1724 does not use adjustable knives.

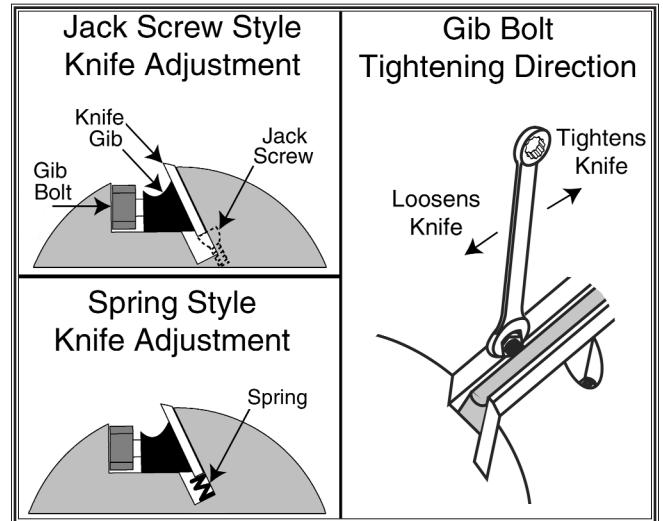


Figure 19. Typical SHOP FOX® cutterhead.

**JACK SCREWS** support the knives from underneath. By threading the jack screws in or out, you can precisely control the knife height. See Figure 19 for identification.

To replace and adjust the knives using the jack screws, do these steps:

1. **UNPLUG THE PLANER!**
2. Loosen the gib bolts and remove the gib and old knives. Remove all of the springs and place them in a plastic bag and save them.
3. Place the new knives, gibs, and gib bolts back in the cutterhead as they were before removal. Make sure the knives are resting on the jack screws when you install them.
4. Place the knife setting jig on the cutterhead so both feet sit solidly on the body of the cutterhead.

If the knife does not allow the jig to sit on the cutterhead evenly, raise or lower the knife with the jack screws to adjust as needed.

5. Snug gib bolts 5 and 4 shown in **Figure 20** to hold the knife in position.
6. Tighten the knives by following the “tightening” instructions on **Page 19**.

**SPRINGS** exert upward pressure under the knives while wedge-type gibs and gib bolts lock the knives in place. See Figure 19 for cutterhead assembly identification.

To replace and adjust the knives using the springs, do these steps:

1. **UNPLUG THE PLANER!**
2. Lower the jack screws completely to get them out of the way.
3. Remove the gib bolts, gibs, and the old knives and install new knives.
4. Loosely install the gibs and gib bolts so the knife will move upward from the pressure of the springs.
5. Place the knife setting jig on the cutterhead so both feet sit solidly on the cutterhead and so that the center of the jig pushes down on the knife (similar to **Figure 18**).
6. Place equal pressure on both ends of the jig so the jig is parallel with the cutterhead and the knife is set.
7. Snug gib bolts 5 and 4 shown in **Figure 20** to hold the knife in position.
8. Tighten the knives by following the “tightening” instructions on **Page 19**.



## NOTICE

Uneven tightening or over-tightening the gib bolts may warp the cutterhead, causing it to become unbalanced, which will lead to premature knife and bearing wear from vibration.

To tighten the knives after adjustment, do these steps:

1. **UNPLUG THE PLANER!**
2. Alternating back-and-forth, lightly snug the gib bolts by following the tightening sequence shown in **Figure 20**, but **DO NOT** tighten the bolts completely.
3. Rotate the cutterhead to the next knife and repeat **Step 2**, and then repeat again with each knife. When all knife gib bolts have been snugged, and you come back to the knife you started with, check the knife height with the jig to make sure that it is still set correctly.
  - If the height is incorrect, readjust as necessary and re-snug the gib bolts.
  - If the height is correct, snug each bolt down a little more in the same alternating method as in **Step 2**, but **DO NOT** tighten the bolts completely. Repeat this tightening sequence again with each knife.
4. When you return to the original knife, tighten all gibs completely in the same fashion, repeating on all knives.
5. Recheck the knife height on all knives with the jig to make sure that the height is still correct.
  - If the height is incorrect, repeat **Steps 2** through **5** until correct.

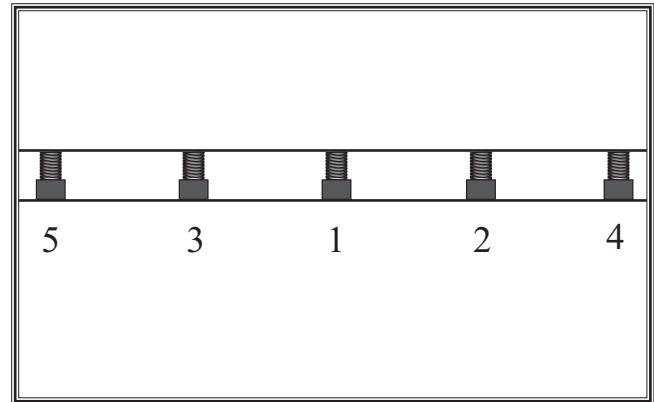


Figure 20. Gib bolt tightening sequence.

# Knife Replacement (W1724)

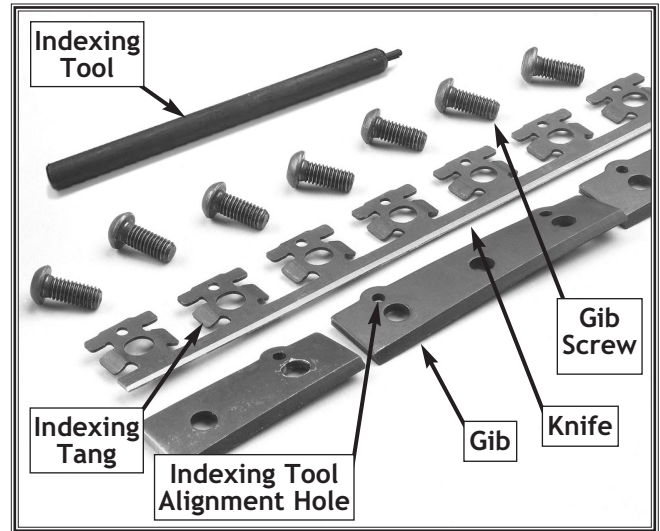
The Model W1724 does not need a knife setting jig in order to establish the correct knife height. The spiral cutterhead has an alignment groove in which the knife indexing tangs fit into, thus establishing the correct knife height every time (See **Figure 23**). However, care must be taken to make sure that the knife tangs fully seat in the alignment groove when you tighten the gib screws. An indexing tool is included with your planer to assist in this alignment. See **Figures 21 and 25**).

**NOTE:** DO NOT attempt to sharpen these knives, as they are self-indexing knives. Only replace these knives with new ones.

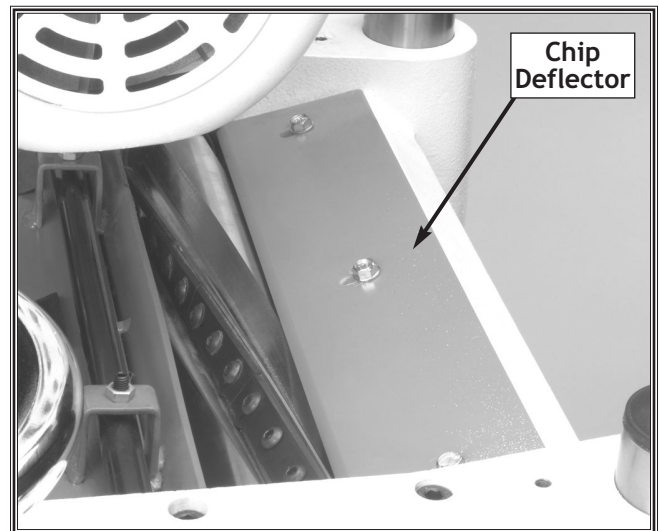
	<p><b>! CAUTION</b>  <b>WEAR</b> thick gloves and use extreme caution when working near planer knives. These knives are dangerously sharp! Failure to exercise care while working near knives could result in severe injury.</p>
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To replace the spiral knives, do these steps:

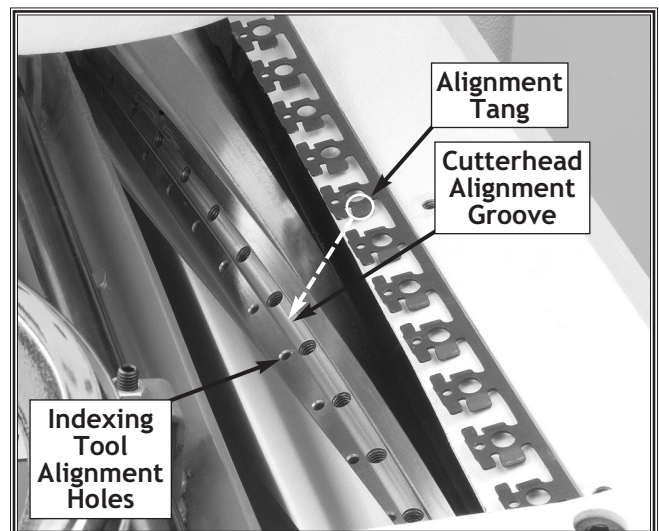
1. **UNPLUG THE PLANER!**
2. Put on your gloves and safety glasses.
3. Remove the dust hood and the plastic chip deflector. See **Figure 22**.
4. Remove all gib screws, gibs, and the knife.
5. Position the new knife and the left-end of the knife indexing tangs in the cutterhead alignment groove. The right-end of the knife will be sprung up and out of the groove. See **Figure 23**.
6. Position the tree-hole gib at the far-left of the knife and cutterhead, and tighten the gib screws only finger tight.
7. Insert the indexing tool in the 7<sup>th</sup> alignment hole from in the knife. See **Figure 25**.



**Figure 21.** Spiral knife system.



**Figure 22.** Chip deflector



**Figure 23.** Knife indexing/alignment system.

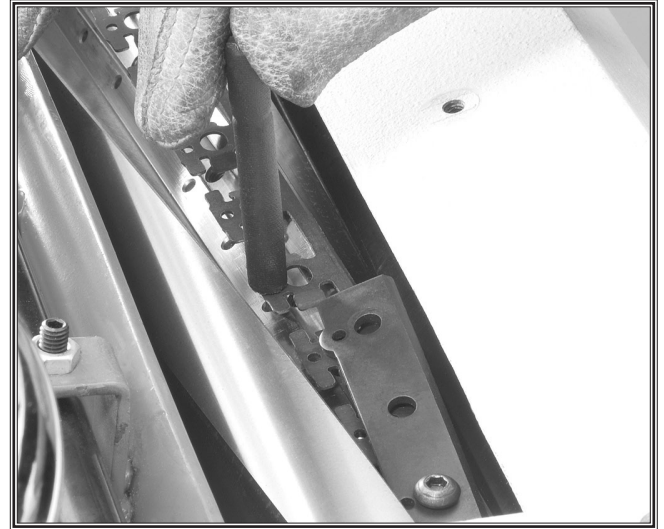


8. Use the indexing tool to control the cutterhead and put a twist in the knife so the knife indexing tangs seat in the cutterhead alignment groove. See **Figure 24**.
9. Position the three-hole gib, and make sure you thread the gib screws into the cutter head with proper alignment so you do not cross-thread the cutterhead. See **Figure 25**.

## NOTICE

Uneven tightening or over-tightening the gib bolts may warp the cutterhead, causing it to become unbalanced, which will lead to premature knife and bearing wear from vibration.

10. Tighten the gib screws on the the two-hole gib and the three-hole gib.
11. Working from left-to-right, repeat **Steps 8** and **9** on the remaining gibs and tighten each gib from left-to-right until the new knife is installed.
12. Rotate the cutterhead to the next knife and repeat **Steps 4** through **11**.
13. Reinstall and adjust the chip deflector and reinstall the dust hood.



**Figure 24.** Twisting knife and aligning gib.



**Figure 25.** Keeping tangs in alignment groove.

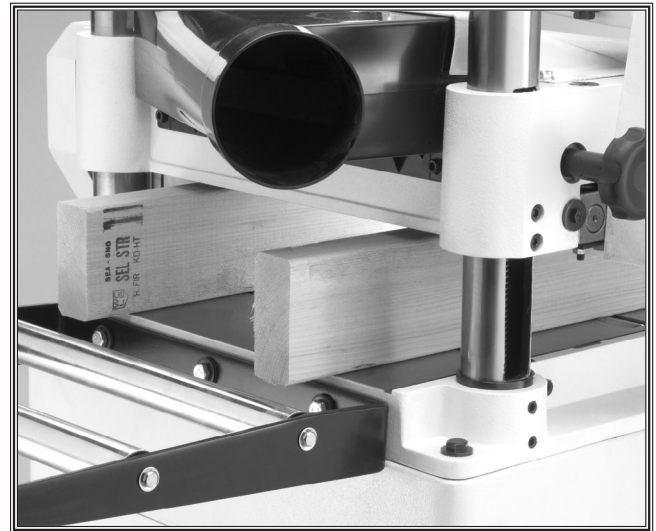
# Feed Rollers and Chip Breaker

The feed rollers and the chip breaker are factory set for general planing. If you need to alter the settings or reset them after maintenance, these components can be adjusted at the same time, assuming that the knife height is set correctly. The standard setting for the chipbreaker is 0.020" below the cutterhead knife at bottom dead center. The infeed roller and outfeed roller should be set to 0.040" below the cutterhead knife at bottom dead center.

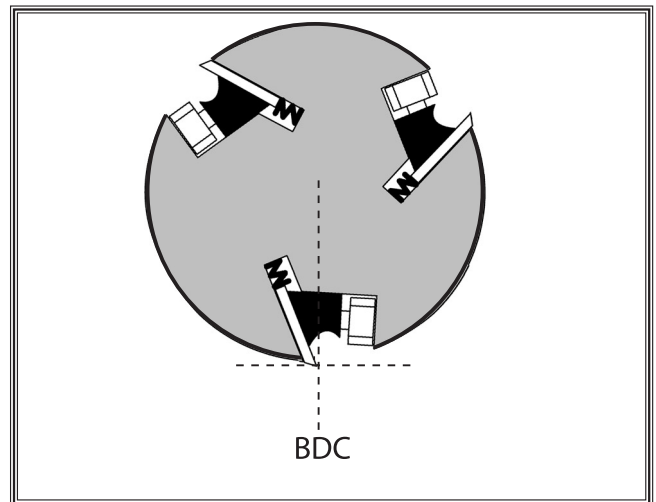
To accurately perform this adjustment, you will need a dial indicator (not included). Refer to **Planer Accessories** on **Pages 34 and 35** for more details.

To adjust the feed rollers and the chip breaker, make sure you have adjusted the cutterhead alignment as outlined on **Page 14** first, then do these steps:

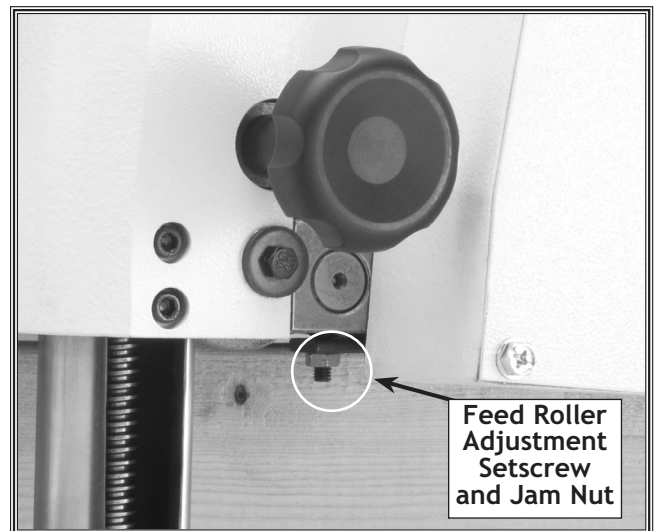
1. **UNPLUG THE PLANER!**
2. **W1723:** Cut two wood boards that are the same height and are at least 20" long.  
**W1724:** Cut one board only.
3. **W1723:** Place both boards across the table as shown in **Figure 26**.  
**W1724:** Place the board in the center of the table and cutterhead.
4. Remove the belt cover and lower the cutterhead casting until the board(s) barely touch the knife edge.
5. Rotate the cutterhead pulley until a knife is at BDC (Bottom Dead Center, see **Figure 27**) as indicated by the knife tip barely grazing the board, making a slight rubbing sound.
6. **W1723:** Lower the feed rollers onto the boards using the feed roller adjustment setscrew shown in **Figure 28**.  
**W1724:** Position the board to the far left and lower the feed rollers onto the board, then move the board to the far right and lower the feed rollers onto the board.



**Figure 26.** Board position on table.



**Figure 27.** Typical cutterhead knife at bottom dead center (BDC).



**Figure 28.** Feed roller adjustment.

7. **W1723:** Lower the chip breaker onto the board(s), using the chip breaker adjustment setscrews shown in **Figure 29**.

**W1724:** Position the board to the far left and lower the chip breaker onto the board, then move the board to the far right and lower the chip breaker onto the board.

8. Make sure that each of the adjustment controls for the feed rollers and the chip breaker are backed off enough so that they will allow the components to move below the current position on the board.

9. Place the dial indicator or Rotacator® where you can measure the cutterhead body movement as shown in **Figure 30**.

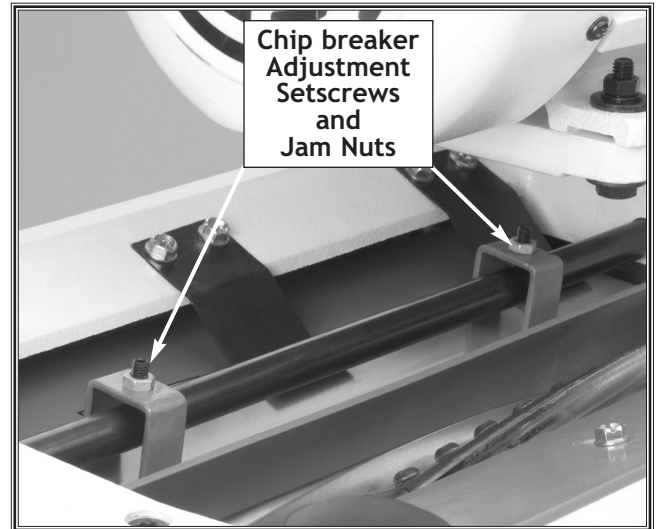
10. Raise the cutterhead body 0.020" as indicated by the Rotacator® or a dial indicator. The feed rollers and the chip breaker should all move freely with the table. If they do not, make sure that they are all resting evenly on the boards at this current position.

11. With the cutterhead body raised to 0.020," lock the chip breaker in place. It should now be set at 0.020" below the knife edge when the knife is at bottom dead center.

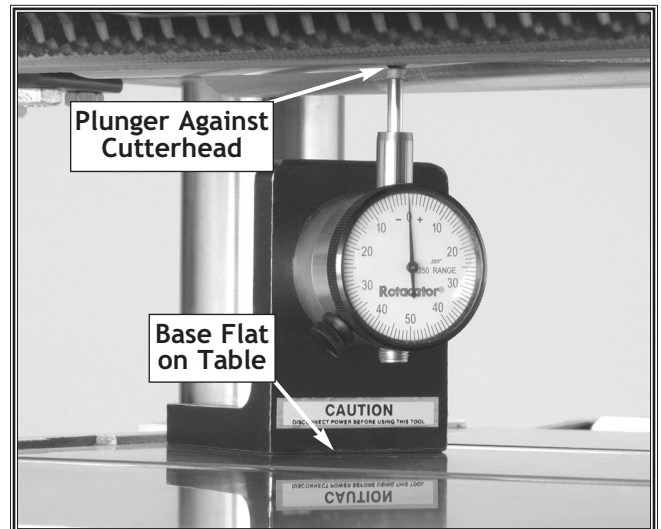
12. Continue raising the cutterhead body another 0.020" as indicated by the Rotacator® or a dial indicator. The outfeed and infeed rollers should now be set to approximately 0.040" below the knife edge at bottom dead center. Lock the outfeed and infeed rollers in place.

13. Re-install the belt cover.

14. Go to **Page 26** and adjust the table bed roller height.



**Figure 29.** Chip breaker height adjustment.



**Figure 30.** Typical Planer with the Rotacator® positioned to measure table movement.

## NOTICE

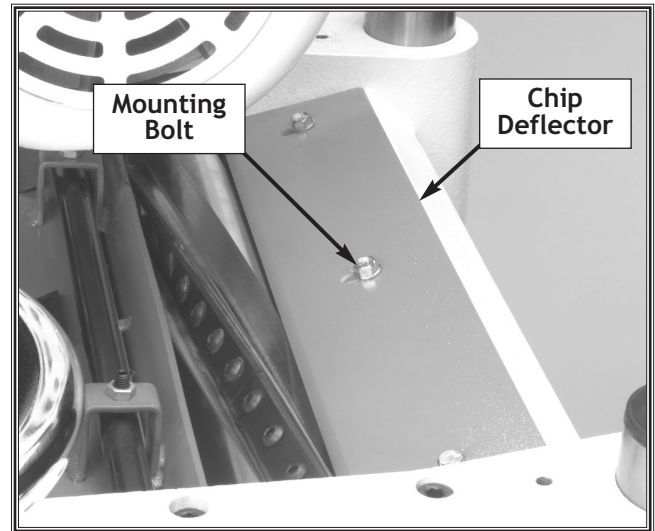
*For super accurate setup, consider purchasing a Rotacator®. This handy tool allows you to adjust the chip breaker to an accuracy within 0.001" every time. Refer to Planer Accessories on Pages 34 and 35 for more details.*

# Chip Deflector

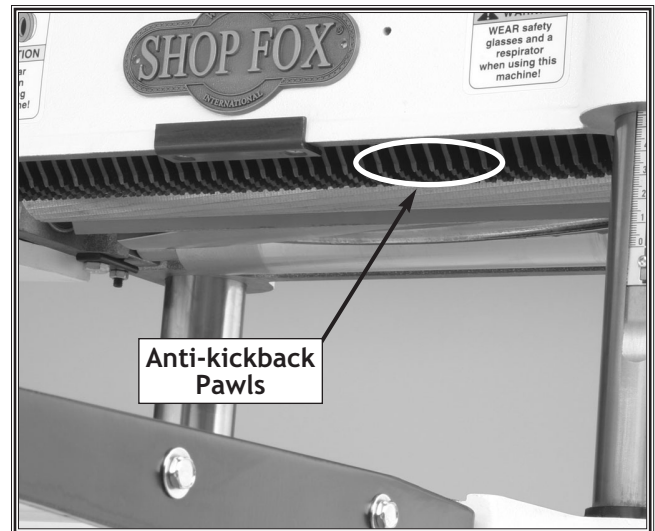
A chip deflector is mounted behind the cutterhead to keep wood chips from falling onto the outfeed roller.

To adjust the chip deflector, do these steps:

1. **UNPLUG THE PLANER!**
2. Remove the dust cover to access the chip breaker, and remove the belt cover.
3. Loosen the chip deflector mounting bolts shown in **Figure 31**.
4. Make sure the deflector is angled toward the cutterhead.
  - If you do not use a dust collector, position the edge of the deflector  $\frac{1}{16}$ " from the knife edge.
  - If you use a dust collector, position the edge of the deflector  $\frac{1}{4}$ " from the knife edge.
5. Rotate the cutterhead with the V-belt pulley and make sure there is enough clearance between all the knives and the chip deflector.
6. Re-tighten the mounting bolts and replace the dust cover and belt cover.



**Figure 31.** Chip deflector mounting bolts.



**Figure 32.** Anti-kickback pawls.

## Anti-Kickback Pawls

### CAUTION

Unbinding and free operation of the anti-kickback pawls is essential for the safe operation of the planer. Pawls clogged with pitch, sawdust, or other contaminants can render them useless if a kickback occurs.

Your planer features anti-kickback pawls that allow the workpiece to enter the planer, but stop the workpiece from coming back out of the entrance in the event of a kickback. See **Figure 32**.

Inspect the anti-kickback pawls frequently to ensure that they swing free and easy and that no pitch, sawdust, or other contaminants restrict operation. Never lubricate the pawls. Lubrication may cause dust to build-up, which will restrict movement.

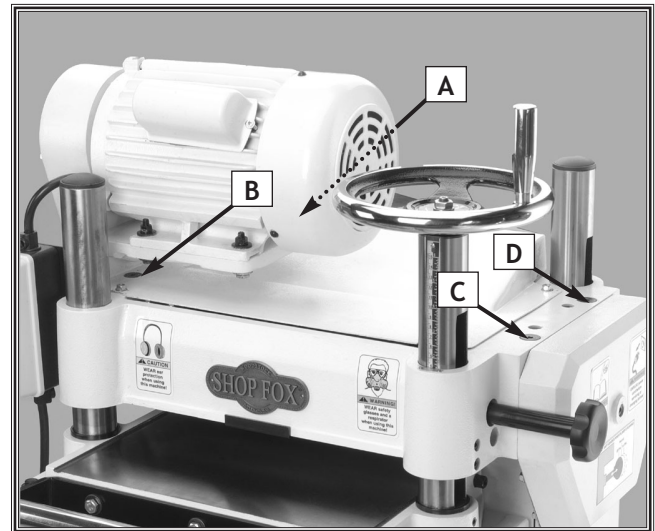


# Roller Spring Tension

Roller spring tension keeps the workpiece securely fed into the planer without chatter or slipping.

To adjust the roller spring tension, do these steps:

1. Adjust the threaded plugs *A*, *B*, and *C* so they are flush with the head casting surface. **Figure 33** shows the four spring adjustment plugs.
2. Adjust plug *D* so it protrudes 1/4" above the head casting. This extra height compensates for the pressure of the chain during operation.



**Figure 33.** Roller spring tension adjustment screws.

## NOTICE

More adjustments may be necessary to the roller spring tension after the machine has been run and is in safe working condition.

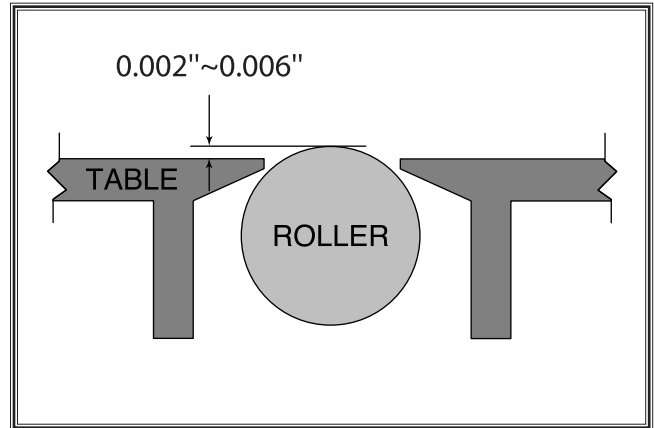
# Table Bed Rollers

The table bed rollers should be set last so they stay out of the way during the other adjustments. The required height of the table bed rollers will vary depending on the type of stock you intend to plane.

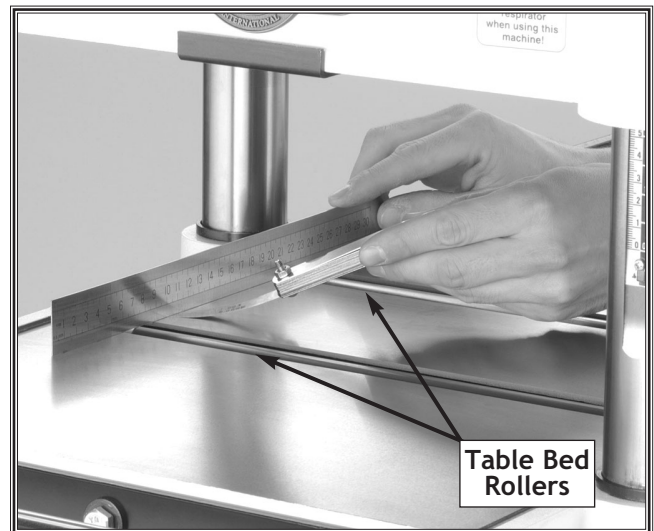
As a general rule, table bed roller height should be between 0.002" and 0.006" above the table (see **Figure 34**). However, some stock may have better results outside of these height settings. Often, a small amount of trial-and-error is required to find the best table roller height for any particular stock. Rough stock will plane better when the rollers are higher, and smooth stock will have less snipe when the rollers are lower.

To adjust the table bed roller height, do these steps:

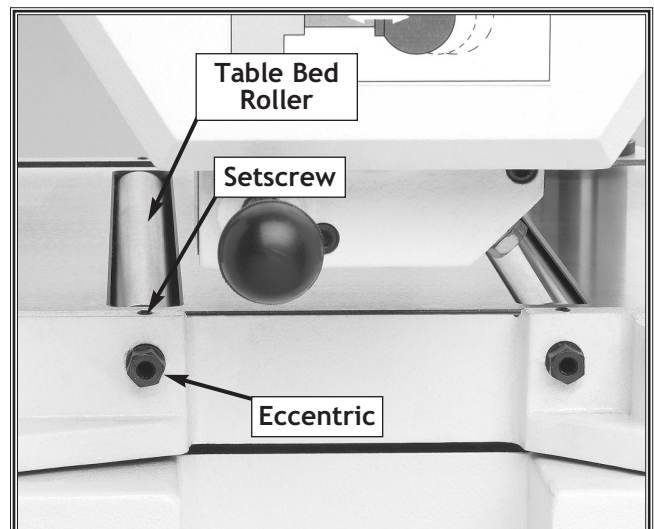
1. **UNPLUG THE PLANER!**
2. Place a straightedge across the length of the table as shown in **Figure 35**.
3. Use a feeler gauge to measure the gap between the table surface and the straightedge, and adjust the table bed rollers by loosening the setscrews and then turning the eccentric to reach the needed roller height. The gap between the straightedge and the table should be even on both sides of the rollers. See **Figure 36**.



**Figure 34.** Table roller tolerances.



**Figure 35.** Measuring table roller height with a feeler gauge.



**Figure 36.** Table rollers and setscrews.

ADJUSTMENTS

## NOTICE

*For super accurate setup, consider purchasing a Rotacator®. This handy tool allows you to adjust the feed table rollers to an accuracy within 0.001" every time. Refer to Planer Accessories on Pages 34 and 35 for more details.*

# OPERATIONS

## Test Run

Before turning the machine *ON* for the first time, make sure you have read through the entire manual and have completed the instructions given in the **Assembly** and **Adjustments** sections, and that you have taken all safety precautions.

Make sure any tools used to assemble/adjust the machine are cleared away. The table should be lowered enough to provide plenty of room for the safe operation of the feed rollers and the cutterhead.

Plug in the power cord and press the *START* button. Make sure that you remain near the switch in case you have to press the *STOP* button in an emergency. Strange noises or vibrations should be investigated and corrected before operating the machine further.

## Feed Rate

The feed rate is the speed that the rollers drive the workpiece through the planer. Your planer features 16 and 20 FPM feed rates.

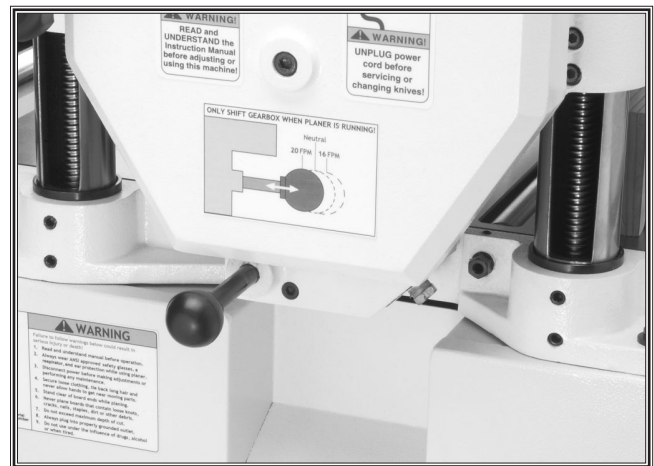
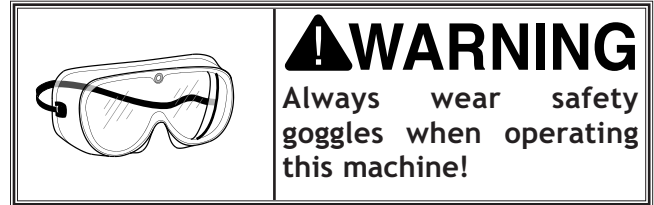
As a general rule, the faster the feed rate the faster the workpiece is planed, but a rougher finish is left behind; and the slower the feed rate, the slower the workpiece is planed, but a smoother finish is left behind.

Often, a small amount of trial-and-error will be the best way to determine which setting is right for your particular application.

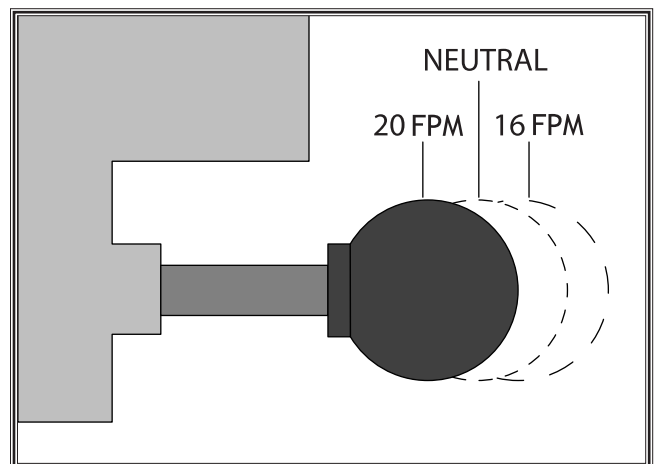
### NOTICE

**DO NOT** change speeds while planing or severe damage to gearbox will result!

To change the feed roller speed, locate the feed rate knob shown in **Figure 37**. The machine must be running in order to change speeds; however, you should **NEVER** be planing stock through the machine when you switch speeds. Start the planer and pull or push in the knob as illustrated in **Figure 38**.



**Figure 37.** Feed rate knob.



**Figure 38.** Feed rate knob positions.



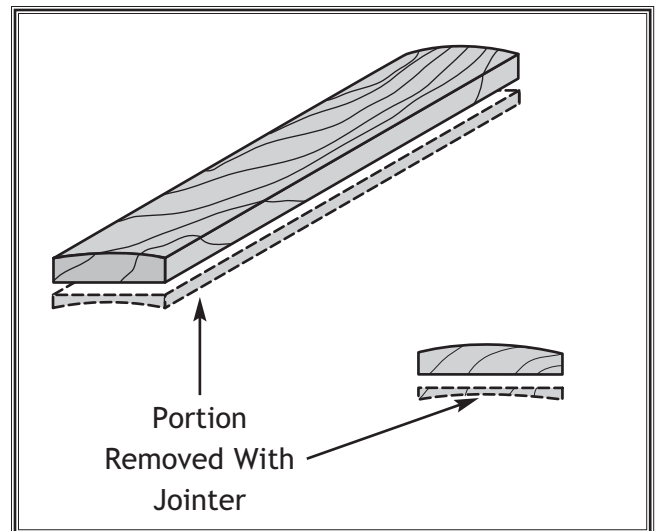
# Operational Tips

## NOTICE

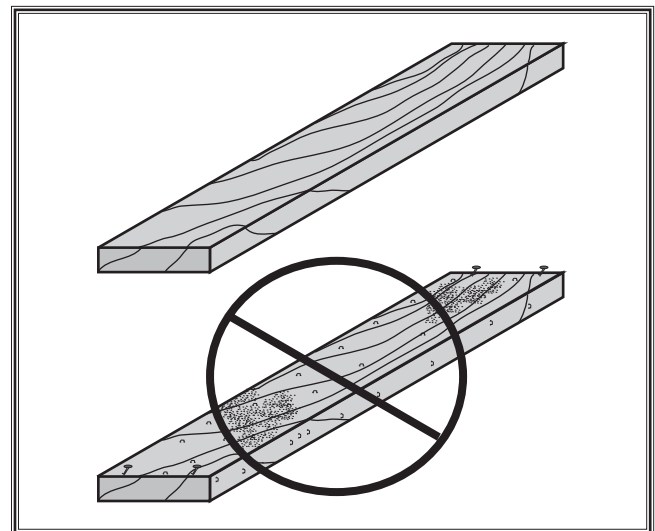
Always lock down cutterhead lock knobs before planing, or the cutterhead will move and create snipe at the ends of the boards.

- Carefully inspect any workpiece that you plan to run through the planer. Each workpiece must have at least one flat surface to slide along the planer table. To create a flat surface, pass the workpiece over a jointer first. See **Figure 39**. Some defects such as moderate twisting, loose knots or severe cracks may make the stock un-planeable.
- Only plane clean lumber. See **Figure 40**. Scrape off all glue from joined boards before planing. Remove all dirt, nails, staples, imbedded gravel, etc. from any workpiece you plan on planing. A hidden nail in a workpiece will instantly damage the knives.
- Plane ONLY natural wood fiber. Never plane wood composites such as particle board, plywood or MDF. Never plane laminates, formica or other synthetic materials.
- Surface wood in the same direction as the grain. Never feed end-cut or end-grained lumber into the planer.
- Keep your work area clear. Always make sure that long workpieces are supported and have enough room to exit the planer.
- When making multiple passes with a long workpiece, use the top rollers to move the workpiece back to the infeed side of the planer.

- Avoid planing a workpiece with a high moisture content. Wood with more than 20% moisture, or wood that has been exposed to rain or snow, will plane poorly and cause unnecessary wear on the knives and motor. Excess moisture may also cause rust or corrosion problems.



**Figure 39.** Face joint the concave side of cupped workpiece before planing.



**Figure 40.** Only plane a clean workpiece.

# Troubleshooting Planing Results

This section covers the most common problems with the workpiece that you may encounter. **DO NOT** make any adjustments until the planer is unplugged and moving parts have come to a complete stop. For Machine troubleshooting go to **Page 33**.

Planing results are affected by the species and condition of the wood, how the planer is setup, and the condition of the knives. The following characteristics are some common problems, and the solutions woodworkers might use while planing.

**SNIPE** – More material is being removed from the board ends rather than the middle of the board.

**SOLUTIONS:**

- Lock down cutterhead lock knobs before planing.
- Provide more support on the infeed and outfeed sides so the wood travels completely through the planer without any vertical tilting. But this alignment problem occurs with all planers to some degree.
- Hold the workpiece flat against the planer tables and rollers so the board does not tilt while entering and exiting the planer.
- Install extra roller stands.

**CHIP MARKS** – Chips are not being properly expelled from the cutterhead. The chips get caught between the knives and the workpiece and hinder knife cutting ability. Chip marks are usually random and uneven.

**SOLUTIONS:**

- Unclog the chip deflector blockage and adjust the chip deflector clearance.
- Increase cleaning intervals.
- Install or service dust collector.

**CHIPPED GRAIN** – Grain shows cut marks and chips.

**SOLUTIONS:**

- **DO NOT** plane against the grain.
- **DO NOT** plane workpiece with knots or cross grain.
- Install sharp knives.
- Make shallower cuts.
- Only surface clean and flat wood.

**FUZZY GRAIN** – Grain fibers stand up on the workpiece after planing.

**SOLUTIONS:**

- **DO NOT** plane damp or wet wood, check wood with a moisture meter. Any wood with a moisture reading over 20% should be allowed to dry.
- Install sharp knives.

**GLOSSY SURFACE** – The wood is scorched, blackened, and/or glossy.

**SOLUTIONS:**

- Increase the cutting depth.
- Adjust feed rate.
- Remove all resin or glue build-up on the rollers, cutterhead, and the surface of the wood to be planed.
- Install sharp knives so shallow cuts do not have to be made to compensate for dull knives that burn the wood. If a glossy and burned surface has existed for a long time, the knives will be heat-damaged, and will not hold a sharp edge after sharpening. The knives must be replaced.

**WOOD DOES NOT FEED CORRECTLY** – The planer draws wood in erratically or slowly.

**SOLUTIONS:**

- Adjust the bed rollers, they may be too low, or too high, or tilted to high on one side.
- Adjust the feed rollers
- Adjust the chip breaker, it may be dragging on the workpiece.
- Plane wood that is not twisted or warped
- Lock down cutterhead lock knobs before planing.
- Remove any pitch build-up on the feed rollers.
- Replace the knives if they are dull or broken.

# MAINTENANCE

## General

Regular periodic maintenance on your planer will ensure its optimum performance. Make a habit of inspecting your planer each time you use it.

Check for the following conditions and repair or replace when necessary:

- Loose mounting bolts.
- Worn switch.
- Worn or damaged cords and plugs.
- Damaged V-belts.
- Any other condition that could hamper the safe operation of this machine.

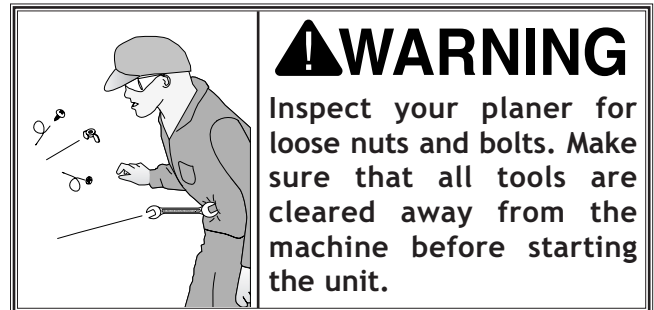
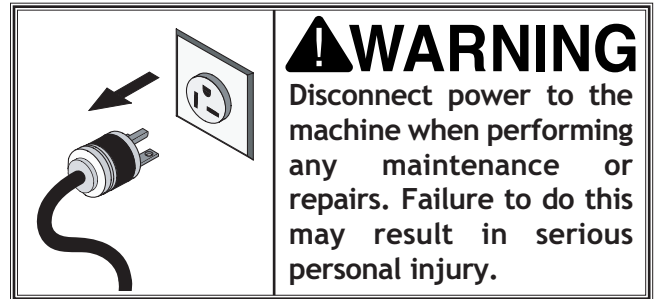
## Cleaning

Wear safety glasses and a respirator and use compressed air to blow-off dust build-up. Dust build-up around the motor can lead to motor failure.

Occasionally it will become necessary to clean the internal parts with more than compressed air. To do this, remove the covers and clean the internal parts with a citrus cleaner or mineral spirits and a stiff wire brush or steel wool. **DO NOT USE WATER—WATER WILL RUST CAST IRON.** Make sure the internal workings are dry before using the planer again. If any essential lubrication is removed during cleaning, relubricate those areas.

## Table

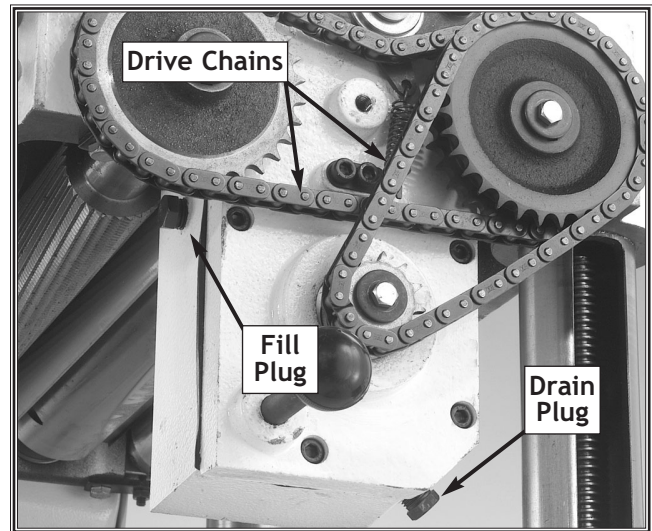
The table can be kept rust-free with regular applications of products like Boeshield® T-9. For long term storage, you may want to consider products like Kleen Bore's Rust Guardit™.



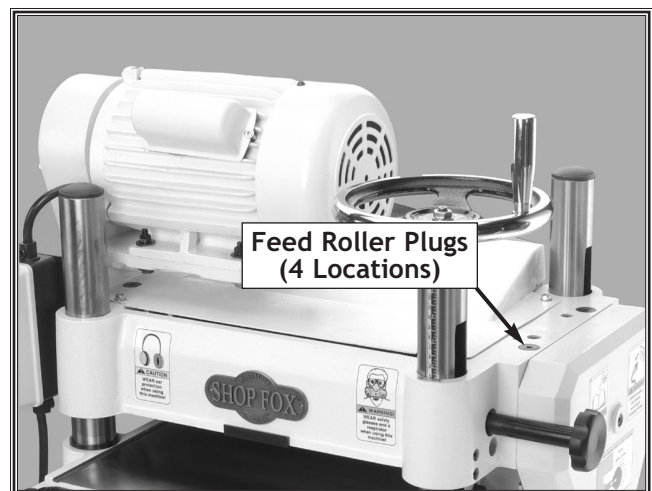
# Lubrication

Since all bearings are sealed and permanently lubricated, leave them alone until they need to be replaced. DO NOT lubricate them. However, your planer does need lubrication in the following listed places, depending on heavy use and the shop environment:

- **Columns and Lead Screws** – Lubricate columns as needed with light oil to prevent rust, and lubricate the four lead screws with a general purpose grease to prevent rust and maintain smooth operation.
- **Chain** – Inspect the table height adjustment chain periodically and lubricate as needed. Use high quality chain lubricant for best results.
- **Gear Box** – Drain the gear box after the first 30 hours of operation. **Figure 41** shows the gear box drain and fill plugs. Refill with 80-90w gear oil. The oil level should reach the top of the filler plug port. After the initial change, inspect fluid levels periodically and change yearly. *If your planer receives heavy use, change the gear oil more frequently.*
- **Drive Chains** – Inspect and lubricate the drive chains every six months. Check the sprockets, the chain, and the master links during inspection. Use a general purpose grease to lubricate the chain.
- **Feed Rollers** – The four feed roller plugs have holes to accept oil. Make sure that no dust is in the oil holes and lubricate all four feed roller plugs with two drops of oil before daily start-up. **Figure 42** shows the lubrication points for the feed rollers. DO NOT lubricate more than two drops or the excess oil will end up on the floor.



**Figure 41.** Gear box drain and fill plugs.



**Figure 42.** Feed roller plug lubrication points.

# Belt Tension

Frequently inspect the V-belt tension during the first twenty hours of break-in operation. During this period, the belts will stretch and seat, which can generate a fair amount of black dust inside of the belt cover. This dust buildup is a normal condition during planer life since the cover retains the dust.

However, it is very important that you check the drive belts so **all belts have the same tension** (belt deflection) after the break-in period. If one belt is looser than the others, you must align the pulleys.

**NOTE:** When replacing belts, always replace belts as a matched set.

To adjust the belts, do these steps:

1. **UNPLUG THE PLANER!**
2. Remove the belt cover.
3. Insert a wooden lever under the motor so you can move the motor when the mounting bolts are loose.
4. Loosen the two motor mounting bolts. See **Figure 43**.
5. Carefully use the wooden lever and pry up on the motor and tension the V-belts.
6. Tighten the bolts so they are tensioned equally and there is  $\frac{1}{4}$ " belt deflection when each belt is pushed firmly with your fingers.
7. Remove the wooden lever and reinstall the belt cover.

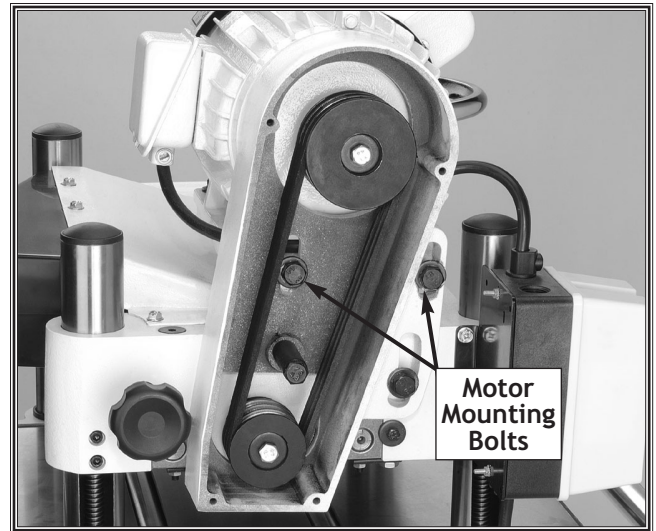


Figure 43. Motor mounting bolt locations.



# Troubleshooting Machine Operation

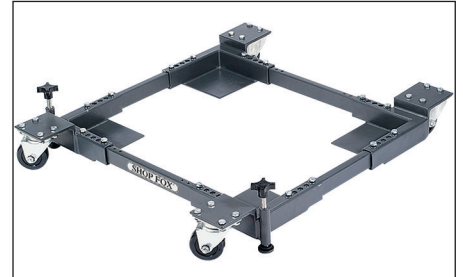
This section covers the most common planer problems. DO NOT make any adjustments until the planer is unplugged and moving parts have come to a complete stop. For troubleshooting planing results go to **Page 29**.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor will not start.	<ol style="list-style-type: none"> <li>1. Low voltage.</li> <li>2. Open circuit in motor or loose connections.</li> <li>3. Faulty start capacitor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power supply for proper voltage.</li> <li>2. Inspect all lead connections on motor and magnetic switch for loose or open connections.</li> <li>3. Replace start capacitor with 600MFD 125VAC unit.</li> </ol>
Fuses or circuit breakers trip open.	<ol style="list-style-type: none"> <li>1. Short circuit in line cord or plug.</li> <li>2. Short circuit in motor or loose connections.</li> <li>3. Incorrect fuses or circuit breakers in power supply.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect cord or plug for damaged insulation and shorted wires and replace extension cord.</li> <li>2. Inspect all connections on motor for loose or shorted terminals or worn insulation.</li> <li>3. Install correct fuses or circuit breakers.</li> </ol>
Motor overheats.	<ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Air circulation through the motor restricted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce load on motor.</li> <li>2. Clean out motor to provide normal air circulation.</li> </ol>
Motor automatically shuts off (possibly resulting in blown fuse or tripped circuit breaker in planer magnetic switch box, or in power supply circuit).	<ol style="list-style-type: none"> <li>1. Thermal Protection Circuit. Breaker amperage is set too low.</li> <li>2. Short circuit in motor or loose connections.</li> <li>3. Low power supply voltage.</li> <li>4. Incorrect fuses/circuit breakers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Unplug machine, open magnetic switch cover, turn amperage dial on Thermal Protection Circuit Breaker to a higher amperage setting.</li> <li>2. Inspect connections on motor for loose or shorted terminals or worn insulation.</li> <li>3. Correct the low voltage condition with a qualified electrician.</li> <li>4. Install correct fuses or circuit breakers.</li> </ol>
Machine slows greatly when planing.	<ol style="list-style-type: none"> <li>1. Feed rate too high.</li> <li>2. Depth of cut too great.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feed workpiece slower.</li> <li>2. Reduce depth of cut.</li> </ol>
Loud, repetitious noise coming from machine.	<ol style="list-style-type: none"> <li>1. Pulley setscrews or keys are missing or loose.</li> <li>2. Motor fan is hitting the cover.</li> <li>3. V-belt is defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect keys and setscrews. Replace or tighten if necessary.</li> <li>2. Tighten fan or shim cover, or replace items.</li> <li>3. Replace V-belt and adjust belt tension correctly.</li> </ol>
Machine is loud when cutting. Overheats or bogs down in the cut.	<ol style="list-style-type: none"> <li>1. Excessive depth of cut.</li> <li>2. Knives are dull.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease depth of cut.</li> <li>2. Sharpen knives.</li> </ol>
Infeed roller marks are left on the workpiece.	<ol style="list-style-type: none"> <li>1. Depth of cut too shallow.</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase depth of cut.</li> </ol>
Outfeed roller marks are left on right side of workpiece.	<ol style="list-style-type: none"> <li>1. Too much spring tension on feed roller.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to Adjustments, Spring Tension.</li> </ol>
Chip buildup on outfeed roller.	<ol style="list-style-type: none"> <li>1. Chips working their way back under the chip deflector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lay duct tape over the mounting bolts along the outside edge to seal any possible gaps.</li> </ol>
Machine howls on startup.	<ol style="list-style-type: none"> <li>1. Chip deflector too close to the cutterhead.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move back 1/8" to 1/4" from the cutterhead.</li> </ol>
Cutterhead casting moves down while cutting.	<ol style="list-style-type: none"> <li>1. Cutterhead is loose on columns. Knives dull.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lock down cutterhead casting lock knobs before planing. Replace knives.</li> </ol>

# Planer Accessories

The following planer accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800 545-8420 or at [sales@woodstockint.com](mailto:sales@woodstockint.com).

**The D2057 SHOP FOX® Adjustable Mobile Base** supports your planer so you can move it easily and lock it in position. Designed for long term and frequent moving of heavy machinery. All SHOP FOX® Adjustable Mobile Bases are the first mobile bases designed strong enough to move heavy machines on a continual basis. The stands are adjustable to fit a variety of machines and can be leveled without the use of shims or tools.



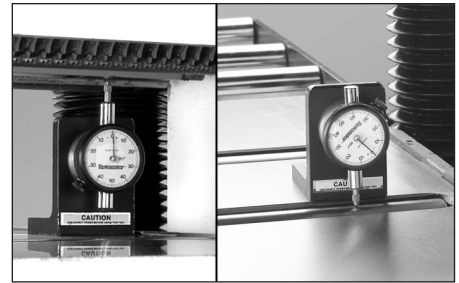
**The SHOP FOX® Heavy-Duty Roller Stands and Roller Tables** make your planer safer and easier to use. All models feature convenient hand knobs for fast height adjustment and offer rigid steel construction. These stands are invaluable for supporting work on planers to help reduce snipe at the ends of long boards due to infeed and outfeed alignment issues. Go to: <http://www.shopfox.biz/rollerstand.cfm> to view all of the available roller tables and stands.



**The D2271 SHOP FOX® Heavy-Duty Roller Table** is a versatile roller table wherever you need extra workpiece support for up to a 1,000 lb. capacity. It features all-steel welded construction and it measures 19" x 65" long. The roller table also comes with 9 ball bearing rollers with four independently adjustable legs for any leveling requirement. The roller table is also adjustable in height from 26<sup>3</sup>/<sub>8</sub>" to 44<sup>1</sup>/<sub>8</sub>".



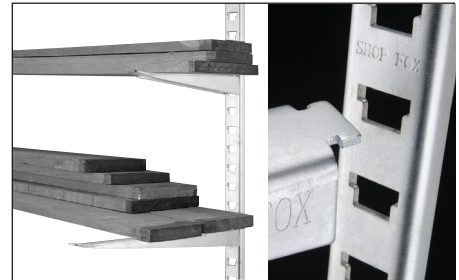
**The W1218 Rotacator®** makes a planer setup process easier and more accurate for adjusting the table rollers, feed rollers, chip breaker, and the pressure bar if equipped on your planer. This tool is a rotating dial indicator on a magnetic base. Shown to the right, this handy device measures table-to-cutterhead alignment and the table roller height. The Rotacator® allows you to set your table within 0.001" from being parallel with the cutterhead.

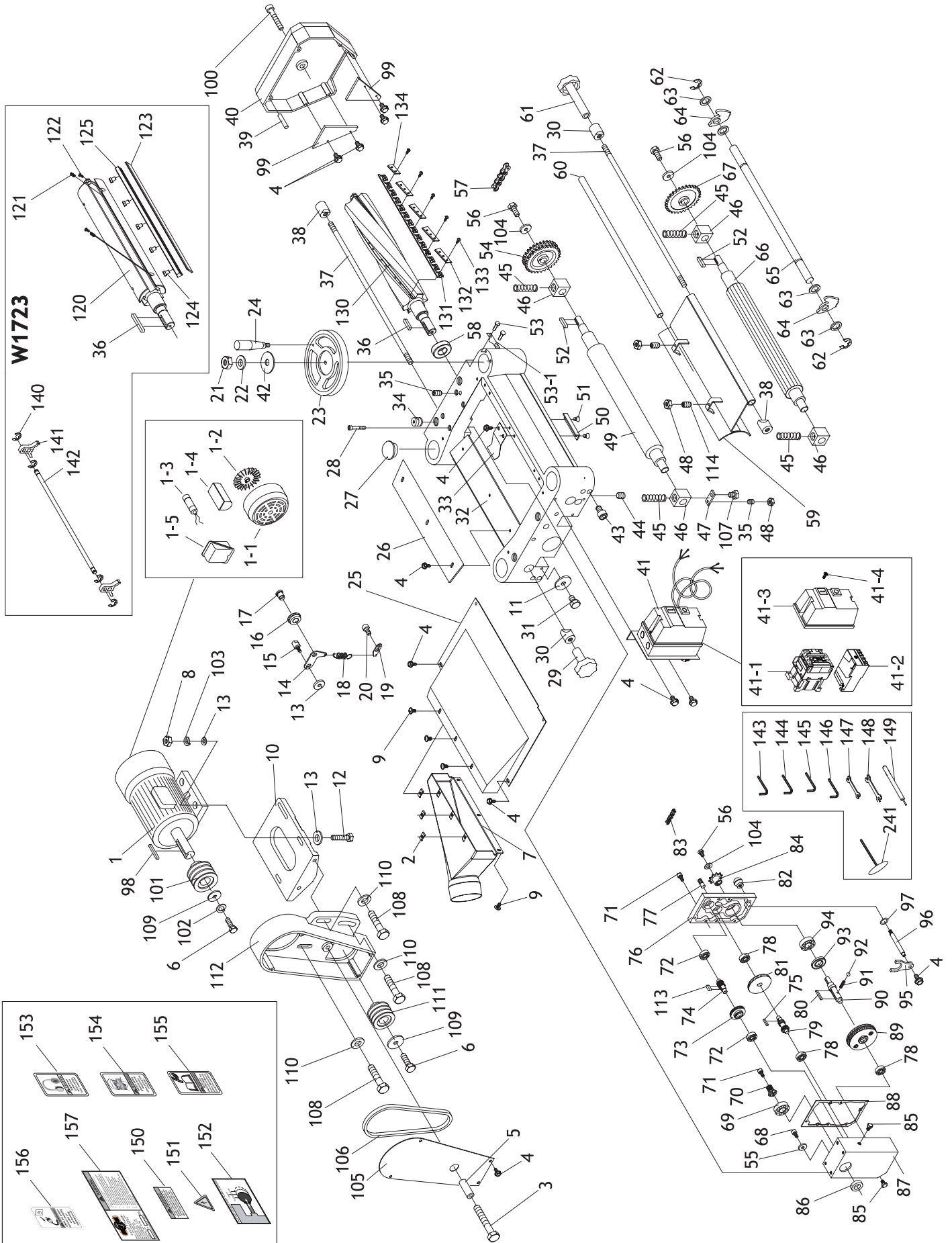


**PLANER PAL® Magnetic Planer Knife Setting Jigs.** Our patented knife-setting system lets you set straight-type planer knives in perfect alignment every time! You can shift nicked knives on 2½" - 4" cutterheads to get a perfect cut with an accuracy of ±.002". Two jigs are needed for 15" - 20" planers. Use the STANDARD JIGS for Steel Knives W1216 (Pair), or the CARBIDE JIGS for Steel or Carbide Knives W1217 (Pair).



**The SHOP FOX® Wood Rack System** features interchangeable rack bars and shelf brackets to create simple or elaborate wood racks. 24" and 48" rack bars can be joined together to provide 6 feet of vertical storage capacity. Easily adjustable 12" and 18" shelf brackets lock into the rack bars for a secure system. Weight capacity is 300 lbs. for 12" brackets and 200 lbs. for 18" brackets when wood rack bars are supported by the floor and weight is evenly distributed. Assembly instructions included. **D2829** 24" Wood Rack Bars, **D2830** 48" Wood Rack Bars, **D2831** 12" Wood Rack Shelf Brackets, and **D2832** 18" Wood Rack Shelf Brackets.

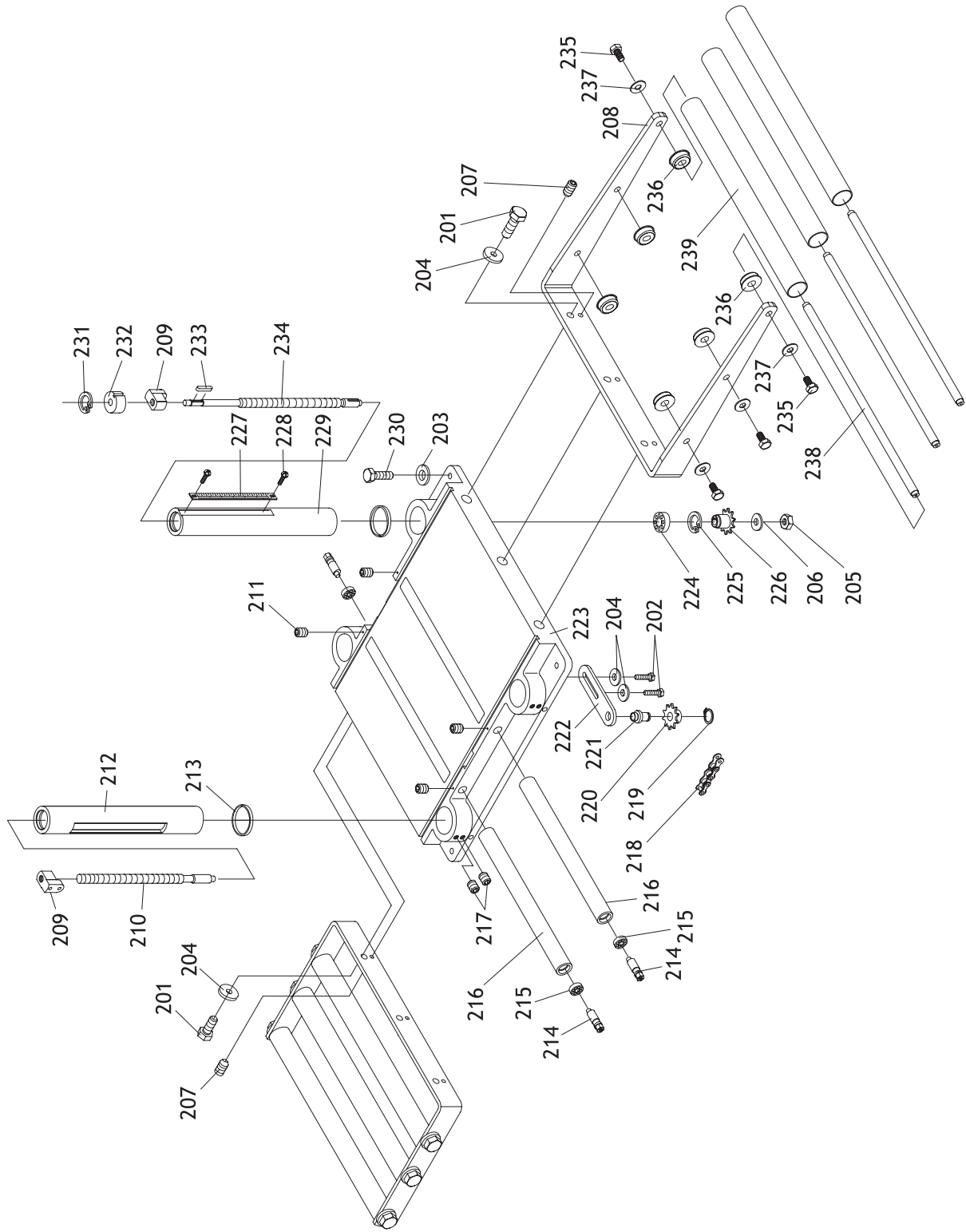




REF	PART #	DESCRIPTION
1	X1723001	3 HP MOTOR
1-1	X1723001-1	MOTOR FAN COVER
1-2	X1723001-2	MOTOR FAN
1-3	XPC600	S CAPACITOR 600M 125V
1-4	X1723001-4	CAPACITOR COVER
1-5	X1723001-5	WIRING BOX
2	X1723002	CLIP
3	XPB13M	HEX BOLT M10-1.5 X 80
4	XPFB01M	FLANGE BOLT M6-1 X 12
5	X1723005	SPACER
6	XPB07M	HEX BOLT M8-1.25 X 25
7	X1723007	DUST CHUTE
8	XPNO3M	HEX NUT M8-1.25
9	XPS14M	PHLP HD SCR M6-1 X 12
10	X1723010	MOTOR PLATE
11	XPW01M	FLAT WASHER 8MM
12	XPB118M	HEX BOLT M8-1.25 X 45
13	XPW01M	FLAT WASHER 8MM
14	X1723014	CHAIN TENSIONER
15	X1723015	SHAFT
16	X1723016	TENSION WHEEL
17	X1723017	SHAFT
18	X1723018	SPRING
19	X1723019	HANGER
20	XPSB04M	CAP SCREW M6-1 X 10
21	XPNO8M	HEX NUT M10-1.25
22	XPW04M	FLAT WASHER 10MM
23	X1723023	HEIGHT HANDWHEEL
24	X1723024	HANDLE
25	X1723025	W1723 UPPER COVER
25	X1724025	W1724 UPPER COVER
26	X1723026	CHIP DEFLECTOR
27	X1723027	COLUMN CAP
28	XPSB05M	CAP SCREW M8-1.25 X 50
29	X1723029	LOCKING KNOB
30	X1723030	GIB
31	XPB02M	HEX BOLT M6-1 X 12
32	X1723032	HEAD CASTING
33	X1723033	CHIP BREAKER SPRING
34	X1723034	TENSIONING SETSCREW
35	XPSS11M	SET SCREW M6-1 X 16
36	XPK09M	KEY 8 X 8 X 36MM
37	X1723037	LOCKING ROD
38	X1723038	THREADED GIB
39	X1723039	PIN
40	X1723040	CHAIN COVER
41	X1723041	MAG SWITCH 220V, 3HP
41-1	X1723041-1	CONTACTOR MA-18
41-2	X1723041-2	RELAY RA-30/18-26A
41-3	X1723041-3	MAG SWITCH COVER
41-4	X1723041-4	PLASTIC COVER SCREW
42	X1723042	DIRECTION SCALE

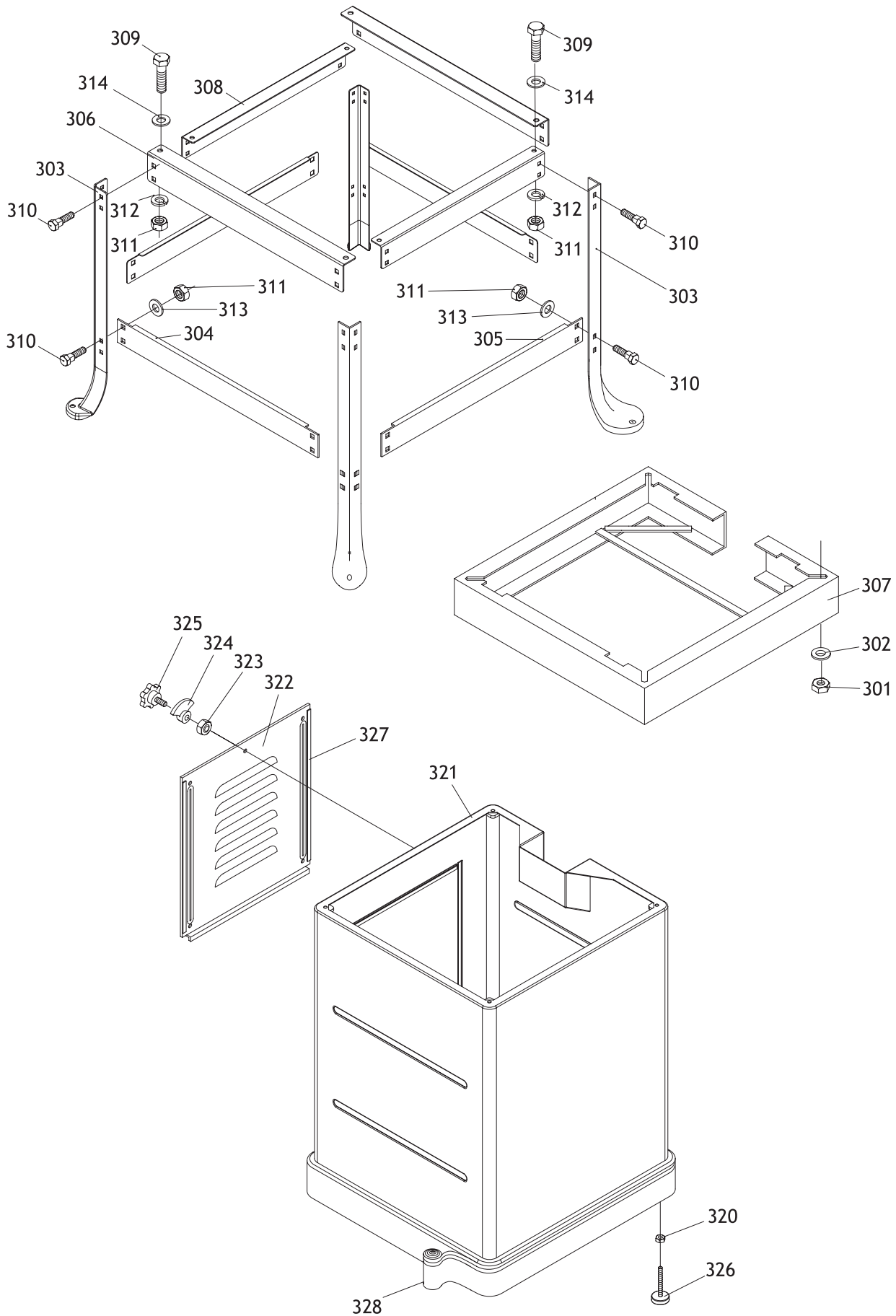
REF	PART #	DESCRIPTION
43	XPSB01M	CAP SCREW M6-1 X 16
44	XPSS14M	SET SCREW M8-1.25 X 12
45	X1723045	SPRING
46	X1723046	BUSHING BLOCK
47	X1723047	PLATE
48	XPNO1M	HEX NUT M6-1
49	X1723049	OUTFEED ROLLER
50	X1723050	DEPTH LIMITER
51	XPFH30M	FLAT HD SCR M5-.8 X 8
52	XPK01M	KEY 5 X 5 X 22MM
53	X1723053	RIVET 2 X 5MM
53-1	X1723053-1	POINTER
54	X1723054	SPROCKET
55	XPW03M	FLAT WASHER 6MM
56	XPB83M	HEX BOLT M6-1 X 16
57	X1723057	CHAIN
58	XP6205	BALL BEARING 6205
59	X1723059	W1723 CHIP BREAKER
59	X1724059	W1724 CHIP BREAKER
60	X1723060	CHIP BREAKER ADJUST ROD
61	X1723061	LOCKING KNOB
62	XPEC05M	E-CLIP 15MM
63	X1723063	SPACER
64	X1723064	ANTI-KICKBACK FINGER
65	X1723065	SHAFT
66	X1723066	INFEED ROLLER
67	X1723067	SPROCKET
68	XPSB26M	CAP SCREW M6-1 X 12
69	XP6204	BALL BEARING 6204
70	X1723070	GEAR
71	XPSB06M	CAP SCREW M6-1 X 25
72	XP6201	BALL BEARING 6201
73	X1723073	GEAR
74	X1723074	GEAR AND SHAFT
75	XPK06M	KEY 5 X 5 X 10MM
76	X1723076	GEAR CASE
77	X1723077	PIN
78	XP6201	BALL BEARING 6201
79	X1723079	GEAR, 2 SPEED
80	XPK11M	KEY 6 X 6 X 40MM
81	X1723081	GEAR
82	XPSW03-1	KNOB
83	X1723083	CHAIN
84	X1723084	SPROCKET
85	X1723085	OIL PLUG
86	X1723086	OIL SEAL 28 X 40 X 8MM
87	X1723087	GEAR BOX
88	X1723088	GASKET
89	X1723089	DOUBLE GEAR
90	X1723090	SHAFT
91	X1723091	SPRING
92	X1723092	BALL 6MM





REF	PART #	DESCRIPTION
93	X1723093	OIL SEAL 25 X 47 X 6MM
94	XP6204	BALL BEARING 6204
95	X1723095	SHIFTER
96	X1723096	SHIFTING HANDLE
97	X1723097	O-RING 12MM
98	XPK12M	KEY 5 X 5 X 30
99	X1723099	SAFETY HATCH
100	XPSB45M	CAP SCREW M8-1.25 X 45
101	X1723101	MOTOR PULLEY
102	XPLW04M	LOCK WASHER 8MM
103	XPLW04M	LOCK WASHER 8MM
104	XPW03M	FLAT WASHER 6MM
105	X1723105	PULLEY COVER
106	XPVM27	V-BELT M-27 3L270
107	XPB09M	HEX BOLT M8-1.25 X 20
108	XPB01M	HEX BOLT M10-1.5 X 30
109	X1723109	SPECIAL WASHER
110	XPW04M	FLAT WASHER 10MM
111	X1723111	CUTTERHEAD PULLEY
112	X1723112	BELT HOUSING
113	XPK10M	KEY 5 X 5 X 12MM
114	XPSS04M	SET SCREW M6-1 X 12
120	X1723120	CUTTERHEAD
121	X1723121	SPRING
122	X1723122	JACK SCREW M5-.8 X 12
123	X1723123	KNIFE, SET OF 3
124	X1723124	GIB BOLT
125	X1723125	GIB
130	X1724130	SPIRAL CUTTERHEAD
131	X1724131	SPIRAL KNIFE, SET OF 3
132	X1724132	LONG GIB
133	XPSB132M	BUTTON CAP SCREW M6-1 X 14
134	X1724134	SHORT GIB
140	XPEC10M	E-CLIP 9MM
141	X1723141	KNIFE GAUGE
142	X1723142	KNIFE GAUGE ROD
143	XPAW06M	ALLEN WRENCH 6MM
144	XPAW05M	ALLEN WRENCH 5MM
145	XPAW04M	ALLEN WRENCH 4MM
146	XPAW03M	ALLEN WRENCH 3MM
147	XPWR810	WRENCH 8 X 10MM
148	XPWR1214	WRENCH 12 X 14MM
149	X1724149	SPIRAL KNIFE ALIGNMENT TOOL
150	X1723150	DON'T OPEN COVER LABEL
151	X1723151	ELECTRICITY LABEL
152	X1723152	SPEED CHANGE LABEL

REF	PART #	DESCRIPTION
153	X1723153	EAR PROTECTION LABEL
154	X1723154	GLASSES/RESPIRATOR LABEL
155	X1723155	READ MANUAL LABEL
156	X1723156	UNPLUG POWER LABEL
157	X1723157	W1723 MACHINE ID LABEL
157	X1724157	W1724 MACHINE ID LABEL
201	XPB09M	HEX BOLT M8-1.25 X 20
202	XPB07M	HEX BOLT M8-1.25 X 25
203	XPW01M	FLAT WASHER 8MM
204	XPW01M	FLAT WASHER 8MM
205	XPNO8M	HEX NUT M10-1.25
206	XPW04M	FLAT WASHER 10MM
207	XPSS14M	SET SCREW M8-1.25 X 12
208	X1723208	ROLLER FRAME
209	X1723209	SPINDLE NUT
210	X1723210	ELEV. LEAD SCREW, SHORT
211	XPSS04M	SET SCREW M6-1 X 12
212	X1723212	COLUMN
213	X1723213	COLUMN RING
214	X1723214	TABLE ROLLER SHAFT
215	XP608	BALL BEARING 608
216	X1723216	TABLE ROLLER
217	XPSS13M	SET SCREW M10-1.5 X 12
218	X1723218	CHAIN
219	XPR05M	EXT RETAINING RING 15MM
220	X1723220	SPROCKET
221	X1723221	SHAFT
222	X1723222	IDLER BRACKET
223	X1723223	BASE
224	XP6202	BALL BEARING 6202
225	XPR12M	EXT RETAINING RING 35MM
226	X1723226	SPROCKET
227	X1723227	SCALE
228	XPS12M	PHLP HD SCR M3-.5 X 6
229	X1723229	COLUMN
230	XPB26M	HEX BOLT M8-1.25 X 30
231	XPR31M	EXT RETAINING RING 38MM
232	X1723232	BUSHING
233	XPK48M	KEY 4 X 4 X 20MM
234	X1723234	ELEVATION SPINDLE, LONG
235	XPB02M	HEX BOLT M6-1 X 12
236	X1723236	PLASTIC ROLLER BUSHING
237	XPW03M	FLAT WASHER 6MM
238	X1723238	ROLLER ROD
239	X1723239	ROLLER
241	X1723241	Long "T" Allen® Wrench 4MM

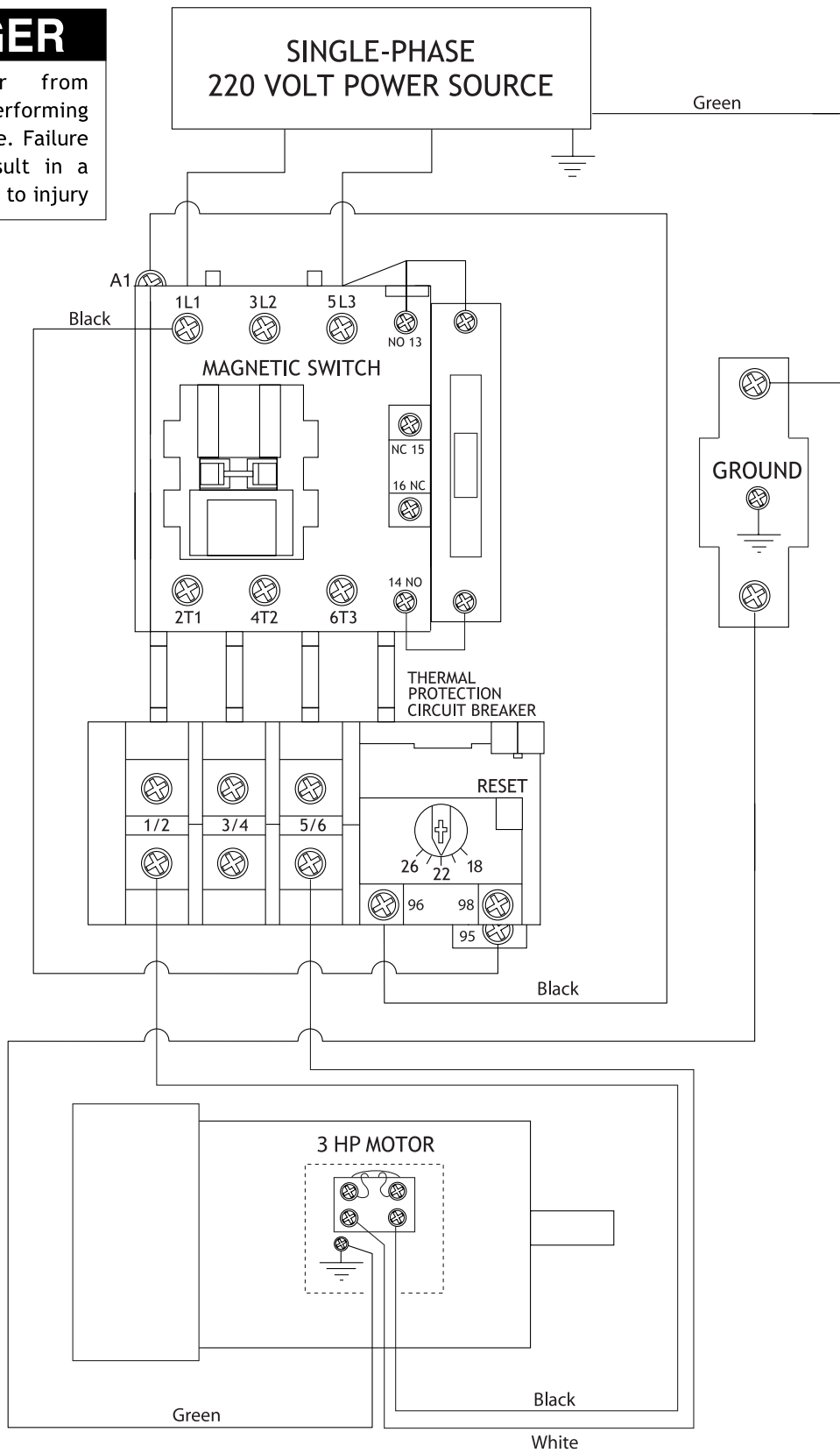


REF	PART #	DESCRIPTION
301	XPNO3M	HEX NUT M8-1.25
302	XPW01M	FLAT WASHER 8MM
303	X1723303	LEG
304	X1723304	LONG SIDE BRACE W/STRIPE
305	X1723305	SHORT SIDE BRACE W/STRIPE
306	X1723306	ANGLE (19 <sup>1</sup> / <sub>2</sub> " Long)
307	X1723307	STAND TOP
308	X1723308	ANGLE (19 <sup>7</sup> / <sub>8</sub> " Long)
309	XPB03	HEX BOLT <sup>5</sup> / <sub>16</sub> -18 X 1
310	XPCB02	CARRIAGE BOLT <sup>5</sup> / <sub>16</sub> -18 X <sup>1</sup> / <sub>2</sub>
311	XPNO2	HEX NUT <sup>5</sup> / <sub>16</sub> -18
312	XPLW04M	LOCK WASHER 8MM

REF	PART #	DESCRIPTION
313	XPW01M	FLAT WASHER 8MM
314	XPW01M	FLAT WASHER 8MM
320	XPNO3M	HEX NUT M8-1.25
321	X1724321	STAND
322	X1724322	PANEL
323	XPNO8	HEX NUT <sup>3</sup> / <sub>8</sub> -16
324	X1724324	PANEL BRACKET
325	X1724325	LOCKING KNOB
326	X1724326	FOOT
327	X1724327	PANEL PAD
328	X1724328	TRIM TAPE

# W1723 and W1724 15" Planer Wiring Diagram

**⚠ DANGER**  
 Disconnect power from machine before performing any electrical service. Failure to do this will result in a shock hazard leading to injury







# WARRANTY CARD

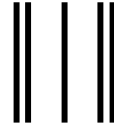
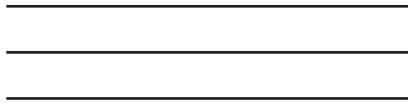
Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone Number \_\_\_\_\_ E-Mail \_\_\_\_\_ FAX \_\_\_\_\_  
 MODEL # \_\_\_\_\_ SERIAL# \_\_\_\_\_

The following information is given on a voluntary basis and is strictly confidential.

- Where did you purchase your SHOP FOX® machine?  
\_\_\_\_\_
- How did you first learn about us?  
 Advertisement                       Friend  
 Mail order Catalog                       Local Store  
 World Wide Web Site  
 Other \_\_\_\_\_
- Which of the following magazines do you subscribe to.  
 American Woodworker                       Today's Homeowner  
 Cabinetmaker                       WOOD  
 Family Handyman                       Wooden Boat  
 Fine Homebuilding                       Woodshop News  
 Fine Woodworking                       Woodsmith  
 Home Handyman                       Woodwork  
 Journal of Light Construction                       Woodworker  
 Old House Journal                       Woodworker's Journal  
 Popular Mechanics                       Workbench  
 Popular Science                       American How-To  
 Popular Woodworking  
 Other \_\_\_\_\_
- Which of the following woodworking/remodeling shows do you watch?  
 Backyard America                       The New Yankee Workshop  
 Home Time                       This Old House  
 The American Woodworker                       Woodwright's Shop  
 Other \_\_\_\_\_
- What is your annual household income?  
 \$20,000-\$29,999                       \$60,000-\$69,999  
 \$30,000-\$39,999                       \$70,000-\$79,999  
 \$40,000-\$49,999                       \$80,000-\$89,999  
 \$50,000-\$59,999                       \$90,000 +
- What is your age group?  
 20-29                       50-59  
 30-39                       60-69  
 40-49                       70 +
- How long have you been a woodworker?  
 0 - 2 Years                       8 - 20 Years  
 2 - 8 Years                       20+ Years
- How would you rank your woodworking skills?  
 Simple                       Advanced  
 Intermediate                       Master Craftsman
- How many SHOP FOX® machines do you own? \_\_\_\_\_
- What stationary woodworking tools do you own? Check all that apply.  
 Air Compressor                       Panel Saw  
 Band Saw                       Planer  
 Drill Press                       Power Feeder  
 Drum Sander                       Radial Arm Saw  
 Dust Collector                       Shaper  
 Horizontal Boring Machine                       Spindle Sander  
 Jointer                       Table Saw  
 Lathe                       Vacuum Veneer Press  
 Mortiser                       Wide Belt Sander  
 Other \_\_\_\_\_
- Which benchtop tools do you own? Check all that apply.  
 1" x 42" Belt Sander                       6" - 8" Grinder  
 5" - 8" Drill Press                       Mini Lathe  
 8" Table Saw                       10" - 12" Thickness Planer  
 8" - 10" Bandsaw                       Scroll Saw  
 Disc/Belt Sander                       Spindle/Belt Sander  
 Mini Jointer  
 Other \_\_\_\_\_
- Which portable/hand held power tools do you own? Check all that apply.  
 Belt Sander                       Orbital Sander  
 Biscuit Joiner                       Palm Sander  
 Circular Saw                       Portable Planer  
 Detail Sander                       Saber Saw  
 Drill/Driver                       Reciprocating Saw  
 Miter Saw                       Router  
 Other \_\_\_\_\_
- What machines/supplies would you like to see?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- What new accessories would you like Woodstock International to carry?  
 \_\_\_\_\_  
 \_\_\_\_\_
- Do you think your purchase represents good value?  
 Yes                       No
- Would you recommend SHOP FOX® products to a friend?  
 Yes                       No
- Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE



Place  
Stamp  
Here



WOODSTOCK INTERNATIONAL, INC.  
P.O. BOX 2309  
BELLINGHAM, WA 98227-2309



FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE



